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# **ANNOUNCEMENT**

OF THE

# MEDICAL SCHOOL

LONGWOOD AVENUE, BOSTON, MASS.

OF

# HARVARD UNIVERSITY

FOR

1914-15

WITH AN ANNOUNCEMENT FOR 1915-16



PUBLISHED BY THE UNIVERSITY

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# MEDICAL SCHOOL CALENDAR

	1	914.	
Sept.	21,	Monday.	Examinations begin for applicants for advanced standing, and for men previously conditioned.
		Saturday.	Examination in Chemistry for admission.
Sept.	28,	Monday.	Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
Oct.	12,	Monday.	Columbus Day: a holiday.
Nov.	2,	Monday.	Last day for receiving essays for the William H. Thorndike Prize.
Nov.	26,	Thursday.	Thanksgiving Day: a holiday.
Dec.	10,	Thursday.	Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.
	RE	CESS FROM D	EC. 23, 1914, TO JAN. 2, 1915, INCLUSIVE
	1	915.	•
Jan.	15,	Friday.	Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1915.
Jan.	27,	Wednesday.	Mid-year Examinations begin.
Jan.	30,	Saturday.	Payment of the second instalment of the tuition- fee is required on or before this date.
Feb.	1,	Monday.	Second half-year begins.
Feb.	22,	Monday.	Washington's Birthday: a holiday.
April	1,	Thursday.	Last day for receiving dissertations for the Bowdoin Prizes.
		Recess fro	M APRIL 18 TO APRIL 24, INCLUSIVE
Мау	1,	Saturday.	Last day for receiving dissertations for the

Dante, Toppan, and Sumner Prizes.

May 1, Saturday. Last day for receiving applications for the Bullard Fellowships and the Moseley Travelling Fellowships.

May 1, Saturday. Last day for receiving applications for Scholarships for 1915-16 (except the Cheever, Haven, and Hayden Scholarships).

May 1, Saturday. Last day for receiving applications of candidates for the degree of M.D. in 1915.

May 31, Monday. Memorial Day: a holiday.

June 1, Tuesday. Examinations begin.

June 14, Monday. Examination in Chemistry for admission.

June 24, Thursday. Commencement.

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 26, INCLUSIVE

Sept. 15, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.

Sept. 27, Monday. Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.

Oct. 12, Tuesday. Columbus Day: a holiday.

Nov. 1, Monday. Last day for receiving essays for the William H. Thorndike Prize.

Nov. 25, Thursday. Thanksgiving Day: a holiday.

Dec. 10, Friday. Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.

Dec. 31, Friday. Last day for receiving dissertations for the Boylston Medical Prizes.

# HARVARD MEDICAL SCHOOL BOSTON

#### GENERAL STATEMENT

The Harvard Medical School started as a branch of the University in 1782 when three professorships of medicine were established. The first degrees in medicine were conferred in 1788. Before 1811, the degree conferred was that of Bachelor of Medicine; after that date the degree of Doctor of Medicine was established. The first Medical School was built in Boston in 1815. In 1906, the Medical School moved into its new quarters on Longwood Avenue. For the construction and endowment of these new buildings the School is indebted to the generosity of Mrs. Collis P. Huntington, Messrs. J. Pierpont Morgan, John D. Rockefeller, David Sears, and a number of other benefactors. At the present time several hospitals are being or have been constructed on the grounds adjacent to the Medical School. A statement in regard to these hospitals and the other hospitals in which teaching is done will be found on pages 26–29 of this catalogue.

In 1910, under the supervision of the Department of Preventive Medicine and Hygiene, courses leading to a degree of Doctor of Public Health were established.

In 1912 the Graduate School of Medicine was established to take charge of the graduate instruction throughout the year, which had previously been given by the Harvard Medical School under the Courses for Graduates and the Summer School of Medicine. The Graduate School of Medicine will also take charge of all special students who are not candidates for the degree of Doctor of Medicine. The Department of Tropical Medicine also offers instruction in the Medical School. For particulars, see the Announcement of the School of Tropical Medicine.

The academic year begins on the Monday preceding the last Wednesday in September, and ends on the Thursday preceding the last Wednesday in June. There is a Christmas recess from December 23 to January 2 inclusive, and a recess of one week's duration in April.

# OFFICERS OF INSTRUCTION \*

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<sup>\*</sup> The Faculty of the Medical School, together with the Dean and Faculty of the Dental School and the Dean of the Graduate School of Medicine, comprise the Faculty of Medicine.

<sup>†</sup> Arranged, with the exception of the President, Dean, and Secretary, on the basis of collegiate seniority.

<sup>‡</sup> The address is Boston, unless otherwise stated.

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ALGERNON COOLIDGE, M.D., Professor of Laryngology.

ROBERT W. LOVETT, M.D., Professor of Orthopedic Surgery.

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HENRY A. CHRISTIAN, M.D., Hersey Professor of the Theory and Practice of Physic.

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# ADMINISTRATIVE OFFICES OF THE MEDICAL SCHOOL

The Dean's Office is in the Administration Building of the Medical School, Room 104. It is open daily from 9 to 1 and from 2 to 5, except on Saturdays, Sundays, and holidays; on Saturdays it is open from 9 to 1. Those seeking information about the Medical School should inquire at this office.

The Bursar's Office is in Dane Hall, Harvard University, Cambridge. It is open daily, except Sundays and holidays, from 9 to 1, for the receipt of fees, payments, and other financial business. A representative of the Bursar will be in the Administration Building at the Medical School at stated hours on certain days at the opening of each term for the receipt of fees from regular students.

#### ADMINISTRATIVE OFFICERS OF THE MEDICAL SCHOOL

President: Abbott Lawrence Lowell, Ll.B., Ll.D., Ph.D. Office, 5 University Hall, Cambridge.

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Secretary of the Faculty: Francis W. Palfrey, M.D. Office, Administration Building, Medical School. Office hours, Tuesdays, 4 to 5 p.m.

- Director of Scholarships: Franklin Dexter, M.D.
  - Office, Room 386, Building D I, Medical School. Office hours, Mondays, 2 to 3.15 p.m., for appointments.
- Director for Appointments for Medical Alumni: A. B. Emmons, 2d, M.D. Office, Administration Building, Medical School. Office hours, Tuesdays and Fridays, 3.30 to 5 p.M., and by appointment.
- Adviser to students in Harvard College preparing for the study of Medicine: Walter B. Cannon, M.D.
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- Chairman of the Committee on the Degree of Doctor of Public Health:
  MILTON J. ROSENAU, M.D.
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- Chief Clerk in the Dean's Office: Helen G. Medbury.
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#### ADMINISTRATIVE BOARD

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- JOHN L. BREMER, M.D., Assistant Professor of Histology.
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- FRANCIS W. PALFREY, M.D. (ex officio), Secretary of the Faculty of Medicine and Assistant in Medicine.

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ALBERT E. STEELE, M.D., Instructor in Bacteri-
ology, 79 Roberts St., Roslindale.
RICHARD G. WADSWORTH, M.D., Fellow in Gyn-
aecology, 522 Commonwealth Ave.
HORACE BINNEY, M.D., Assistant in Genito-Urinary
Surgery, 205 Beacon St.
DAVID CHEEVER, M.D., Associate in Surgery, 20 Hereford St.
FREDERICK T. LORD, M.D., Instructor in Medicine, 305 Beacon St.
NATHANIEL R. MASON, M.D., Assistant in Obstetrics
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ROBERT L. DENORMANDIE, M.D., Assistant in Ob-
stetrics, 357 Marlborough St.
HAROLD A. GALE, M.D., Fellow in Pediatrics, Winchester.
GEORGE H. POWERS, Jr., M.D., Assistant in Otology,
298 Marlborough St.
BETH VINCENT, M.D., Assistant in Surgery, 295 Beacon St.
ZABDIEL B. ADAMS, M.D., Fellow in Anatomy, 166 Newbury St.
CLEAVELAND FLOYD, M.D., Instructor in Bacteri-
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ogy, 522 Commonwealth Ave.
FRANK L. RICHARDSON, M.D., Lecturer on Anaes-
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WILLIAM B. ROBBINS, M.D., Assistant in Medicine,
356 Marlborough St.
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416 Marlborough St.
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Neuropathology,

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272 Newbury St.

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366 Commonwealth Ave.

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419 Beacon St.

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1775 Dorchester Ave., Dorchester.

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Harvard Medical School. tive Pathology. KURT H. THOMA, D.M.D., Assistant in Dental Anat-

omy, 330 Dartmouth St. PAUL D. WHITE, M.D., Fellow in Medicine,

Massachusetts General Hospital.

EDWARD A. BOYDEN, A.M., Teaching Fellow in His-

tology and Embryology, Harvard Medical School.

HAROLD I. GOSLINE, M.D., Assistant in Neuro-

pathology, Psychopathic Hospital.

FRANCIS B. GRINNELL, M.D., Instructor in Preven-

tive Medicine and Hygiene and Charles Follen Folsom

Teaching Fellow in Hygiene, Charles River Village.

GILBERT HORRAX, M.D., Arthur Tracy Cabot Fellow in charge of the Laboratory of Surgical Research.

Harvard Medical School.

CYRUS H. FISKE, M.D., Assistant in Biological Chem-

istry, Harvard Medical School.

HARRY C. SOLOMON, M.D., Assistant in Neuropathology, Psychopathic Hospital.

MAX M. MILLER, A.M., Teaching Fellow in Histology

and Embryology, Harvard Medical School.

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THEODORE F. ZUCKER, S.M., Assistant in Biological Chemistry, 63 Oxford St., Cambridge.

McKEEN CATTELL, S.B., Teaching Fellow in Physiology.

Harvard Medical School.

### AUSTIN TEACHING FELLOWS

FRANK A. HARTMAN, Ph.D., in Physiology, Harvard Medical School.

MacIVER WOODY, M.D., in Surgery, Boston City Hospital.

RICHARD S. AUSTIN, M.D., in Bacteriology, Harvard Medical School.

PAUL E. LINEBACK, M.D., in Histology and Embryology, Harvard Medical School.

GOODWIN LEB. FOSTER, A.B., in Biological Chemistry, Sharon.

# HARVARD MEDICAL SCHOOL

#### ADMISSION OF STUDENTS

As candidates for the Degree of Doctor of Medicine the School receives the following:

- I. Graduates in arts or science of approved colleges or scientific schools who can furnish evidence
- (a) That they have such knowledge of physics, of biology, of general chemistry, and of organic chemistry,\* as may be obtained from one year's course in each of these subjects as given in approved colleges and scientific schools.
  - (b) That they have a reading knowledge of French or German.
- II. Students who have completed two years of work in a college or scientific school of high rank, provided they present certificates (1) that they have stood in the upper third of their class, (2) that one year's course has been taken in physics, in biology, and in general chemistry and in organic chemistry, and (3) that they have a reading knowledge of German or French.

These requirements are to be satisfied in full before matriculation.

Partial deficiencies in single subjects may be made up prior to admission by courses in the Harvard Summer School.

Students are requested to apply for admission before July 1st on registration blanks to be furnished by the Secretary.

The Administrative Board reserves the right in its discretion to refuse applicants if the number admitted is as large as can be effectively taught.

#### ADMISSION TO ADVANCED STANDING

Students who began their professional studies in other approved medical schools may be admitted to advanced standing and become candidates for the degree of M.D. under the following conditions:—

They must have fulfilled the requirements for admission enumerated under I or II.

They must furnish a satisfactory certificate of time spent in medical study, successfully completed, at least equal to that spent by the class to which they seek admission.

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<sup>\*</sup> In organic chemistry college half-courses of good grade may be accepted if satisfactorily completed.

They must furnish satisfactory certificates that they have done satisfactory laboratory and practical work in the subjects already pursued by the class to which they seek admission.

They must pass all examinations required to have been passed by the class which they seek to enter.

Before they can be admitted to the third or fourth class they must pass the first general examination.

Graduates of other medical schools of recognized standing may be admitted to advanced standing in accordance with the above regulations.

The minimum time of residence at this School for candidates for the degree of M.D. shall be one year; all candidates for the degree of M.D. must perform in full the work of the fourth year of the regular curriculum.

## DIVISION OF STUDENTS

Students are divided into four classes according to their time of study and proficiency. No student may advance with his class, or be admitted to advanced standing, until he has passed the required practical examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed the first general examination.

No student will be permitted to continue his membership in the School, if at the beginning of his second year he has failed on all of the practical examinations on first-year subjects.

In order that the time of study shall count as a full year, students of all classes must register at the Dean's office on Monday, the first day of the academic year.

Students are required not to engage as hospital assistants during term time, except in so far as required by the School curriculum.

Any student may obtain a certificate of his period of connection with the School.

The Administrative Board reserves the right to require the withdrawal of any student at any time whenever in the opinion of his instructors it is manifest that he is incompetent for his work, or for any reason he is unfitted to continue his course.

#### EXAMINATIONS

There will be two kinds of examinations, general and practical. Two general examinations, each both oral and written, will be required of the candidate for the M.D. degree, the first after the completion of the second year, and the second after the completion of the fourth year of medical study. Practical examinations will be held in the various subjects of the curriculum at the end of the respective courses and in September.

For the first general examination the student may choose either June or September, but no student will be admitted to this examination until he has completed the courses included in the examination, and has passed practical examinations in these various courses. The subjects comprised in the first general examination will be Anatomy, Histology and Embryology, Physiology, Biological Chemistry, Pathology, Pharmacology and Bacteriology. This examination further shall assume and require an elementary knowledge of Physics, Inorganic and Organic Chemistry, and Biology.

For the second general examination the student may choose either June or January, but no student will be admitted to this examination until he has passed satisfactorily the first general examination, has completed four years of medical study in four different calendar years, including the regular fourth-year course of study at the Harvard Medical School, has completed the courses included in this examination, and has passed practical examinations in these courses. The subjects comprised in the second general examination will be Preventive Medicine and Hygiene, Medicine, Surgery, Pediatrics, Obstetrics, Gynaecology, Dermatology, Syphilis, Neurology, Psychiatry, Ophthalmology, Otology and Laryngology.

No student who has failed to pass a general examination will be permitted to repeat the examination within the calendar year in which he failed. Any student who fails three times in a general examination will be debarred from further attempts.

If a portion of the general examination (written or oral) is taken by a student, this will constitute an attempt to pass the examination. Failure to complete all parts, unless prevented by illness, shall be regarded as a failure to pass and necessitate a year's interval before the student may appear again for examination.

The practical examinations will be conducted by the several Departments, and the student may choose whether he will take the practical examinations at the end of each course, or near the time of the opening of the following academic year at times assigned by the several Departments.

In addition to the above examinations every student is required: —

To dissect the three parts of the body to the satisfaction of the demonstrator;

To take charge of and report on six cases in Obstetrics, under supervision and instruction;

To furnish satisfactory evidence of having engaged in the practical exercises in Medicine and Surgery.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty.

DEGREES 23

Every student having entered the Medical School previous to 1912–13, after two failures to pass in any subject, must give notice twenty-four hours in advance at the Dean's Office of his intention to take each subsequent examination in that subject and pay a charge of three dollars.

Students entering in 1912-13 and subsequent years, after two failures to pass a practical examination, must pay a fee of three dollars at the Dean's office before appearing for each additional practical examination in the same subject.

#### DEGREES

#### DEGREE OF DOCTOR OF MEDICINE

Every candidate for the degree of Doctor of Medicine at this University must be at least twenty-one years of age, and of good moral character. He must fulfil all the requirements for admission to this Medical School; must give evidence of having studied in a recognized Medical School at least four full years, of which one year must be spent in the regular fourth-year course of this School; must pass all the required examinations, and fulfil satisfactorily the special requirements enumerated above.

The degree of Doctor of Medicine will be given to those candidates who fulfil the above requirements. The degree of Doctor of Medicine cum lande will be given to candidates entering the Medical School previous to 1912-13 who have obtained an average of eighty per cent, or over, in all the required examinations.

Candidates entering the Medical School in and after 1912-13, who pass the final general examination with honor, shall receive the degree of Doctor of Medicine cum laude, and candidates who pass both general examinations with honor shall receive the degree of Doctor of Medicine magna cum laude.

Candidates for the degree must make application for it in writing, on blanks furnished at the Dean's office, on or before May I of the year in which they propose to graduate.

# DEGREE OF DOCTOR OF PUBLIC HEALTH

The degree of Doctor of Public Health is open to holders of the degree of Doctor of Medicine from the Harvard Medical School or other recognized Medical Schools, and to other properly qualified persons. Candidates for the degree of Doctor of Public Health must spend not less than one year in work upon a special subject, approved by the Committee on the Degree of Doctor of Public Health, and present a thesis containing some original research acceptable to the Faculty of Medicine. Candidates for this degree may be given credit for any course offered in any department of the University, provided it has the approval of the Faculty of Medi-

cine, and candidates from other institutions may be admitted to advanced standing. A minimum of one year in residence shall be required of all candidates for the degree of Doctor of Public Health. Information in regard to this degree may be had from Professor M. J. ROSENAU, Chairman of the Committee on the Degree of Doctor of Public Health.

#### DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

There has been established within the Faculty of Arts and Sciences a Division of Medical Sciences consisting of members of the Faculties of Medicine and of Arts and Sciences, who are to recommend candidates for the degrees of A.M. and Ph.D. to the Faculty of Arts and Sciences. Work in Medical Sciences leading to these degrees may be carried on in several of the laboratories of the Medical School by properly qualified students.

Candidates for the degree of Master of Arts must be Bachelors of Arts of Harvard College, or Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Arts and Sciences. Candidates must pursue an approved course of study in medical science for at least one year.

Candidates for the degree of Doctor of Philosophy must fulfil certain preliminary requirements, must devote to approved advanced studies not less than two years, — at least one of which must be spent in residence at this University, and must pass general examinations and present an account of original work in an accepted thesis, before being granted the degree.

Further information concerning these degrees may be obtained from Assistant Professor Lawrence J. Henderson, Chairman of the Division of Medical Sciences, Harvard Medical School.

#### FEES AND EXPENSES

#### DEGREE OF DOCTOR OF MEDICINE

The fees are:—For matriculation, five dollars; for instruction (including laboratory charges except breakage, damage and loss of apparatus), two hundred and twenty-five dollars for each year (if in two payments, at the first, one hundred and thirty-five dollars; at the second, ninety dollars); for a half-year alone, one hundred and thirty-five dollars.\* The matriculation fee and the instruction fee (if in two payments, the first instalment thereof) are to be paid to the Bursar† punctually at the beginning of the academic year, without the presentation of a bill; and the second instal-

<sup>\*</sup> Students who were members of the School in 1912-13 or earlier will be allowed to complete the course for the fees prescribed in the Catalogue of 1912-13.

<sup>†</sup> The Bursar's office is in Dane Hall, Harvard Sq., Cambridge. Hours 9-1.

ment is to be paid on or before January 31. All charges for breakage, damage and loss of apparatus are payable to the School in accordance with the requirements established by the several departments in which they occur. A student may rent a microscope from the School upon application to the Committee on Microscopes. A deposit of one dollar with the Dean will entitle the student to the use of a locker in the School buildings.

No degree can be conferred until all dues to the University have been discharged. Each student whose dues remain unpaid on the day fixed for their payment is required at once to cease attending lectures and using laboratories or making use of any other privileges as a student until his financial relations with the University have been arranged satisfactorily to the Bursar. Failure to comply with this rule is deemed cause for final separation from the University.

#### BOND REQUIRED OF STUDENTS

Every student is required to file with the Bursar on his entrance to the School a bond of fifty dollars, executed by two sufficient bondsmen (one of whom must be a citizen of the United States), or to deposit fifty dollars in money, to cover the loss or injury of any property belonging to the University, or for which it is responsible. Blank forms of bonds may be obtained from the Secretary of the Faculty or from the Bursar. No officer or student of the University is accepted as a bondsman. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School and have subsequently received their bond from the Bursar.

#### DEGREE OF DOCTOR OF PUBLIC HEALTH

A fee of \$150 annually is charged for tuition, and \$5 for matriculation. Of this amount, \$95 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31. No degree can be conferred until all dues to the University have been discharged.

# DEGREES OF MASTER OF ARTS AND DOCTOR OF PHILOSOPHY

For these degrees, a fee of \$150 is charged for tuition, and a graduation fee of \$20. Of this amount, \$90 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31st. The graduation fee of \$20 must be paid before Commencement. No degree can be conferred until all dues to the University have been discharged.

#### STILLMAN INFIRMARY FEE

Not later than October 5 in each academic year, any student may pay to the Bursar the sum of four dollars for the maintenance of the Stillman Infirmary; and, on the order of a physician, every student who has taken advantage of this opportunity will be given, in case of sickness, in return for the fee, a bed in a ward, board, and ordinary nursing for a period not exceeding two weeks in any one academic year.

#### WITHDRAWAL FROM THE SCHOOL

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Administrative Board, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction. This remission will date from the reception by the Dean of a written notice of the student's withdrawal from the School. No degree can be granted until the student has paid the full tuition fee for each year (first, second, third, fourth) in which he has been registered as a member of the School.

If a student withdraws from the School for part of a year for good and sufficient reason as determined by the Faculty, he may leave his fees deposited with the Bursar to be used at some later date for instruction equivalent to that which he missed by his withdrawal. If a student shortens his four years' work by working in the Summer School of Medicine, he must still pay a full tuition fee for each year he is registered as a member of the School.

#### CLINICAL ADVANTAGES

The Medical Department of the University is established in Boston, in order to secure for Anatomy, Pathology, and the various clinical subjects, those advantages which are found only in large cities. The following clinics and hospitals of Boston are utilized extensively for clinical exercises for medical students, who are admitted freely to the Out-Patient departments, wards and operating rooms of these hospitals:—

The Peter Bent Brigham Hospital.—This general hospital has been in active operation since February, 1913. The hospital is for general medical and surgical cases, and is situated on ground adjacent to the Medical School buildings. There are in all about two hundred beds, and there is a medical and surgical out-patient department which is open for patients throughout the twenty-four hours. Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, and Dr. Harvey

CUSHING, Moseley Professor of Surgery, in the Harvard Medical School, have been appointed by the trustees of the Hospital Physician-in-chief and Surgeon-in-chief respectively.

The Collis P. Huntington Memorial Hospital. — This Hospital, which has been erected by the Cancer Commission of Harvard University on the Medical School grounds, affords opportunity for the study of human tumor cases, with the advantage of a close approximation of clinical and laboratory facilities. The aim of the hospital is the study of special problems with the view of adding to the knowledge of the natural history and the rational treatment of tumors, and also to be of public service in affording means for early diagnosis and in carrying out treatment or giving advice regarding therapeutic measures. Accommodations are provided for twenty-four in-patients; out-patients are also received at stated hours.

The Massachusetts General Hospital. - During the past year, six thousand two hundred and fifty-one patients were treated in the wards, five thousand four hundred and twenty-four patients were treated in the Accident Ward, and there were one hundred forty-seven thousand four hundred and twenty-eight visits to the Out-Patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, or demonstrated in the amphitheatres. Operations are numerous, and are performed in the surgical building. Last year there were three thousand eight hundred and eighty-seven operations in the house and three thousand two hundred and thirteen in the Out-Patient Department and Accident Ward. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Larvngology, Diseases of the Nervous System, Children's Diseases, Orthopedics, Diseases of the Genito-Urinary System, and Syphilis. Two Dalton scholarships, of \$500 each, are open annually to the house pupils.

The Boston City Hospital. — During the past year, eighteen thousand and seventy-seven cases were treated in its wards, and there were two hundred and eight thousand one hundred and ninety-seven visits in its various outpatient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, forty-nine thousand street accidents are treated yearly. Surgical operations are performed in the amphitheatre. There are special services for diseases of women, of the eye, the ear, the skin, and the nose and throat. Diseases of women and of the nervous system are also largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons two or more times a week.

In this hospital, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching over four thousand nine hundred a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital. — More than eight hundred patients were delivered during the last year in the Hospital. In the out-patient department, nearly two thousand cases were attended by the hospital Externes, who are appointed from the third and fourth-year students. Clinical instruction is given in these cases by the physicians to out-patients and by the house physicians.

The Boston Dispensary.—About one hundred and ten thousand visits were made by out-patients at this charity during the past year. Students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of Medicine and Surgery. The opportunities in children's work are unusually good, as over one-third of the out-patients are children and there is, in addition, a well-equipped Hospital for Children, with thirty beds chiefly for medical cases.

Infants' Hospital (Rotch Memorial Building). — The wards of the Hospital are devoted entirely to infants. Twenty beds are at present in use. The number will, however, probably be soon increased. The material of the Hospital is used throughout the year for teaching both students and graduates.

Children's Hospital. — In April, 1914, the new buildings of the Hospital on Longwood Avenue, adjacent to the Harvard Medical School, were opened. During the past year more than eighteen hundred cases were treated in the wards and nearly thirty thousand visits were made to the out-patient departments. Instruction in pediatrics, surgery, and orthopedic surgery is given by members of the hospital staff.

The McLean Hospital. — During the past year a daily average number of two hundred and twenty patients, received from all parts of the country, were under treatment. Advanced methods of treatment are employed, including physical exercise, occupation, massage, hydrotherapy, etc., applied by persons expert in these methods. In the laboratories, pathological, chemical, and psychological work is carried on in immediate connection with the clinical studies and treatment of cases. There is a good special library of works in psychiatry and neurology, and a large list of American and foreign journals available for study. Clinical conferences are regularly held by the Medical Staff for the discussion of all

cases admitted, including a study of the history, diagnosis, prognosis, and treatment of each case. These exercises and clinical demonstrations in the wards are available for a limited number of students.

The Boston State Hospital. — During the past year twenty-one hundred and eighty-four patients were under treatment. Clinical instruction is given here in general clinics to medical students, and there are in addition facilities for the special study of cases by students taking elective courses. Besides regular commitments, emergency, voluntary and temporary care cases are received; the whole number of patients admitted last year was nine hundred and seventy-three, including many instructive examples of the various forms of mental disease.

The Psychopathic Hospital.—This is the receiving hospital of the Boston State Hospital, situated on Fenwood Road, one block removed from the Medical School grounds. The hospital was opened to patients in June, 1912. It has one hundred beds and receives patients at the rate of over one thousand five hundred a year. The Out-Patient Department receives patients at the rate of about one thousand a year. This large admission rate insures the presence at all times in the hospital wards of a varied clinical and pathological material.

The Massachusetts Charitable Eye and Ear Infirmary. — Over sixtyone thousand visits were made by patients at this institution during the past year. These cases present every variety of disease of the ear and eye, and supply a large number of operations. A new and enlarged hospital, considered to be one of the best of its kind in the world, has been erected on land adjoining the Massachusetts General Hospital. It is believed that this building will provide adequately for the proper treatment of the constantly increasing number of patients.

The Free Hospital for Women. — This hospital is devoted exclusively to the surgical treatment of the diseases peculiar to women. The hospital has a capacity of sixty-seven beds. Operations are performed on Tuesdays, Wednesdays, and Thursdays throughout the morning. Physicians and medical students are invited to attend the operations and the medical ward visits with the Visiting Surgeon. Out-patient clinics are held every day in the week, beginning at nine o'clock in the morning and at three o'clock in the afternoon, excepting Saturday afternoon. The clinics average from fifteen to thirty in attendance. Post-graduate courses in gynaecological examinations are given in these clinics. A well equipped laboratory is connected with the institution, where instruction in gynaecological pathology is given. A library containing the principal works on gynaecology is available for the use of students and visiting physicians.

#### HOSPITAL APPOINTMENTS

About eighty appointments as Internes and Assistants are made annually to hospitals in and about Boston for terms of service varying from six months to two years. These appointments are made after a competitive examination. In recent years almost every graduate of the Harvard Medical School desirous of hospital experience has obtained an appointment in some one of these hospitals.

## THE CANCER COMMISSION OF HARVARD UNIVERSITY

The Cancer Commission of Harvard University was founded in 1899, by the late Mrs. Caroline Brewer Croft, who left in her will a sum of money for the investigation of the cause and treatment of cancer. Dr. J. Collins Warren and Dr. Henry K. Oliver were the Trustees of this fund. Since that time other sums have been contributed for cancer research and the Cancer Commission of Harvard University was organized in 1909, consisting of the following members: J. Collins Warren, M.D., Chairman; Henry K. Oliver, M.D., and J. Collins Warren, M.D., for the Caroline Brewer Croft Fund; Henry P. Walcott, M.D., and Arthur T. Cabot, M.D., for the Corporation of Harvard College; William T. Councilman, M.D., and Theobald Smith, M.D., for the Harvard Medical School. To fill the vacancy caused by the death of Dr. Arthur T. Cabot, Dr. Edward H. Bradford was appointed by the Corporation in 1912; Mr. Arthur Adams was also appointed Treasurer, and Dr. Robert B. Greenough, Secretary.

Under this Commission research on cancer problems has been carried on, and five reports of research work have been published. Investigations were carried on in the laboratories of the Harvard Medical School, and at the Massachusetts General Hospital until April, 1912, when the Collis P. Huntington Memorial Hospital (page 27) was completed. The work of the Cancer Commission is at present carried on in the laboratories of the Harvard Medical School and in the Huntington Hospital. E. E. Tyzzer, M.D., Assistant Professor of Pathology, is Director; Thomas Ordway, M.D., Instructor in Medicine, is Physician in charge of the Hospital, and Ellis Kellert, M.D., is Assistant Physician; Henry A. Christian, M.D., Consulting Physician; Robert B. Greenough, M.D., Consulting Surgeon. Miss I. W. Mason is Matron and Superintendent of the Hospital.

William Duane, Ph.D., Assistant Professor of Physics, is Research Fellow of the Cancer Commission in charge of the research work on radium and radioactive substances, and their preparation for therapeutic use. He is assisted by William T. Bovie, M.D., Research Fellow in Physics, and Clarence C. Little, S.D., in Genetics.

During the year 1913-14, one hundred and nine new patients were cared for in the wards of the hospital, and one hundred and ninety-six patients were seen as out-patients.

#### WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by John Collins Warren, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor Emeritus from 1847 to his death in 1856, son to John Warren, the first Hersey Professor of Anatomy and Surgery. This important Museum is open to students in the School, and its collections are used in demonstration of the lectures. It occupies the upper three floors of the Administration Building. Its Curator is Dr. William Fiske Whitney.

The collection has about ten thousand specimens, illustrating both normal and pathological anatomy. Students may have access to these specimens at any time upon application to the Curator.

Besides dissections and serial sections of many bones, the anatomical collection includes many corrosion preparations, plaster and papier maché models of bones, organs, and various parts of the body, and frozen sections.

The pathological collection is being constantly enlarged by the addition of numerous specimens, many of them preserved in their natural colors by Kaiserling's method.

#### LIBRARIES

Libraries in the Administration Building and in three of the laboratory buildings contain the literature of the subjects taught in this School. These libraries are open daily and contain about 23,900 volumes, 34,000 pamphlets, and receive 260 current periodicals.

The College Library at Cambridge is open to the students of this School. The Boston Public Library is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Bursar's office, or deposited with the Bursar the sum of fifty dollars, may also use this library. The Bursar will furnish on application the necessary certificate of bond or deposit.

The Boston Medical Library, No. 8 The Fenway, contains about 82,000 bound volumes and 56,000 pamphlets, and nearly 650 current periodicals are on file. This very valuable Library is open to those who desire to consult medical literature, on week days from 9.30 A.M. to 10 P.M., on Saturdays till 6 P.M.

## FELLOWSHIPS AND SCHOLARSHIPS

#### FELLOWSHIPS

BULLARD FELLOWSHIPS. In 1891, WILLIAM STORY BULLARD, of Boston, gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three physicians who were distinguished for their honorable personal character

and for their professional services in this community." Accordingly the three following fellowships were established:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income of the first two is two hundred and fifty dollars each, and of the last, two hundred and seventy-five dollars.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by the Administrative Board of the Medical School to make such original investigations in Medical Science as in their opinion will be most useful to the profession and to the community. The results of such investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee. If published with the approval of the Committee, mention shall be made of the fact that the work was done under a Bullard Fellowship.

Holders of Bullard Fellowships are required to do an amount of work equivalent to not less than ten hours a week throughout the academic year and to present to the Committee at the end of the academic year a report on the amount and result of the work performed.

Applications for the Bullard Fellowships must be handed to the Dean on or before May 1.

The James Jackson Cabot Fellowship; with an income of three hundred and fifty dollars. In 1906, Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot gave six thousand dollars to establish the James Jackson Cabot Fund in the Medical School. In 1912 Guy C. Cabot added four thousand dollars to this fund. The income remaining after adding a certain percentage to the principal each year is preferably, but not necessarily, to be used for a fellowship "to aid and encourage practical work in scientific medicine."

CHARLES FOLLEN FOLSOM TEACHING FELLOWSHIP. In 1908 eleven thousand eight hundred and forty-three dollars and sixty-four cents was given by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870, Lecturer on Hygiene, 1877–79, on Hygiene and Mental Diseases, 1879–80, on Mental Diseases, 1880–82; Assistant Professor of Mental Diseases, 1882–85, and Overseer, 1891–1903. It was the desire of the givers that there be established in the Medical School a Charles Follen Folsom Teaching Fellowship in Hygiene or in Mental and Nervous Diseases, and that the incumbent receive the annual income of the fund, or such part of it as may be consistent with the standing rules of the Corporation in such cases. This fellowship, with an income of

five hundred and seventy-five dollars, has been assigned to the Department of Hygiene until the further order of the President and Fellows.

HENRY P. WALCOTT FELLOWSHIP IN CLINICAL MEDICINE; with a stipend of one thousand dollars. Founded in 1910 by Frederick Cheever Shattuck, A.M., M.D., LL.D. "The income to provide for the support of a Fellow in Clinical Medicine, who shall receive his appointment from the Corporation on nomination by the Jackson Professor of Clinical Medicine, who, while the holder of the Fellowship, shall not engage in private practice but devote his time to teaching and clinical research work."

WILLIAM O. Moseley, Jr., Travelling Fellowships; two, with a stipend of one thousand seven hundred and fifty dollars each, for the purpose of studying medicine in Europe. In January, 1912, Mrs. William O. Moseley left a bequest of seventy-four thousand dollars to establish two travelling Fellowships, to be granted annually to two men who have attended the Harvard Medical School for three or four years, and who have given evidence of their diligence and ability, the election of such men to be made by the President and proper officers connected with the Medical School. Applications for these Fellowships must be handed to the Dean on or before May 1st.

ARTHUR TRACY CABOT FELLOWSHIP. In 1913, Dr. and Mrs. Frederick C. Shattuck gave twenty-five thousand dollars for the establishment of a Fellowship in Surgery in memory of Arthur Tracy Cabot, M.D., of the Class of 1872, Fellow of the Corporation. The holder of the Fellowship is not ordinarily to engage in active private practice while holding it but to devote himself to the advancement of Surgery whether in the United States or elsewhere. The nomination to this Fellowship is by preference to be in the hands of the Moseley Professor of Surgery.

AUSTIN FELLOWSHIPS. Six teaching fellowships, of five hundred dollars each, have been established from the income of the Austin Fund and assigned to the Medical School.

PROCTOR FUND. A bequest of fifty thousand dollars by Ellen Osborne Proctor for the purpose of promoting the study of chronic diseases. The income of this fund is to be devoted to the care in hospital of persons afflicted with chronic disease, and to investigations into the nature and treatment of the same. The special disposition of the income of this fund is under the control of the heads of the departments of Theory and Practice of Physic, Clinical Medicine, and Pathology.

#### SCHOLARSHIPS

The Cheever Scholarship is awarded to a student of the first-year class. The Hayden Scholarship may be so awarded. All the other Scholarships are awarded to members of the three upper classes.

EDWARD M. BARRINGER SCHOLARSHIPS. From the estate of Edward M. Barringer, of Schenectady, N. Y., thirty thousand two hundred and thirteen dollars and forty-nine cents has been received as his residuary bequest establishing the "Edward M. Barringer fund." "And I direct that the said 'President and Fellows' forever maintain from the income of said rest and residue (if the same shall be sufficient) two scholarships for students in said Medical School, the annual amount or value of such scholarships to be fixed from time to time by the said President and Fellows in their best discretion but at not less than \$300 and \$200 respectively; and with such conditions as to them shall seem best, to be called respectively 'Edward M. Barringer Scholarship No. 1,' and 'Edward M. Barringer Scholarships, with the incomes named above, are awarded to deserving students, preferably those of the fourth class.

Lucius F. Billings Scholarship, with an income of two hundred and fifty dollars, was founded in 1900 from a bequest under the will of Lucius F. Billings. The income may be divided between two or more students.

David Williams Cheever Scholarship, with an income of two hundred and fifty dollars, was founded in 1889 by David Williams Cheever, M.D., LL.D., of Boston, of the Class of 1852. It is to be awarded to a poor and meritorious student of the first year, after three months' probation in the Medical School.

Orlando W. Doe Scholarship. The bequest of Orlando Witherspoon Doe (A.B. 1865, M.D. 1869) was five thousand dollars. One-half of the income derived therefrom, amounting to one hundred and twenty-five dollars, "is to be given annually as a scholarship to a deserving student in the Medical department."

JOSEPH EVELETH SCHOLARSHIPS. Three Scholarships with an annual income of two hundred dollars each. Founded from the residuary bequest of thirty-seven thousand eight hundred and ninety-seven dollars and fourteen cents, made by Joseph Eveleth, of Boston, "for aiding deserving and indigent young men in obtaining an education in said College or any of the schools connected therewith." Three Scholarships on this foundation have been assigned to the Harvard Medical School.

George Haven Scholarships, with an income of eleven hundred dollars, were founded in 1913 from a bequest under the will of George Haven, the income to be used annually for scholarships to deserving students of the first year in the Medical School, the amount of such scholarships to be at the discretion of the Scholarship Committee.

The Lewis and Harriet Hayden Scholarship for colored students was founded in 1894 from a bequest of Mrs. Harriet Hayden. The income, two hundred and fifty dollars, may be divided between two or more students.

HILTON SCHOLARSHIPS. Two Scholarships, with an income of two hundred and twenty-five dollars each, were founded in 1897 from a bequest of William Hilton.

WILLIAM OTIS JOHNSON SCHOLARSHIP, with an income of one hundred and seventy-five dollars, was founded in 1912 from a bequest under the will of Mrs. William O. Johnson, in memory of her husband, William Otis Johnson, M.D., of the Class of 1845.

CLAUDIUS M. JONES SCHOLARSHIP, with an income of three hundred dollars, is from a bequest of six thousand dollars by Claudius Marcellus Jones, of the Class of 1866, M.D. 1875.

ALFRED HOSMER LINDER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1895 by Mrs. George Linder. It is to be awarded to a needy student who shall have proven himself to be of sound principles and marked ability.

The Joseph Pearson Oliver Scholarship, with an income of four hundred dollars, was founded in 1904 by patients of the late Joseph Pearson Oliver, M.D. 1871, to be awarded "to such needy and deserving student of the Medical School as the Administrative Board shall annually recommend."

CHARLES B. PORTER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 from a bequest of five thousand dollars by William L. Chase.

CHARLES PRATT STRONG SCHOLARSHIP, with an income of two hundred and twenty-five dollars, was founded in 1894 by friends and patients of the late Charles Pratt Strong, of the Class of 1876, M.D. 1881.

ISAAC SWEETSER SCHOLARSHIP, with an income of three hundred dollars at present, was founded in 1892 by Mrs. Anne M. Sweetser. The income is to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

The John Thomson Taylor Scholarship, with an income of two hundred and fifty dollars, was founded in 1899 by Mrs. Frederic D. Philips in memory of her brother, John Thomson Taylor, who died in 1889. He was a student of the Medical School from 1887 to 1889.

EDWARD WIGGLESWORTH SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 by the family of the late Edward Wigglesworth, of the Class of 1861, M.D. 1865, the yearly income of the fund to be paid to a needy and deserving student of the Medical School whom the Administrative Board shall recommend.

Francis Skinner Fund. A fund of five thousand dollars was established in 1905, the income of which shall be placed at the disposal of the Dean of the Medical School to be used by him in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses. Two hundred dollars is available annually.

This fund remained as an anonymous gift until 1908, when by vote of the President and Fellows of Harvard College it was named the Francis Skinner Fund in honor of the late Francis Skinner, Esq., the donor.

COTTING GIFT. The income of a fund received from the late Dr. Benjamin E. Cotting will be given to such medical student or students as the Administrative Board may select, having regard to the pecuniary needs, intellectual capacity, faithfulness and earnest endeavor, rather than to highest scholarship merely. The amount to be awarded annually will be one hundred and twenty-five dollars.

John Foster Fund. The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is available in alternate years in the Law School and in the Medical School, for one or more meritorious students needing assistance. The next assignment in the Medical School will be made in 1916.

James Ewing Mears Gift in Medicine. Dr. J. Ewing Mears has entered into an agreement with the President and Fellows whereby he has provided for the payment of \$225 a year during his lifetime for the maintenance of a scholarship in the Medical School; and the permanence of this scholarship has been secured by a bequest of \$5000. The scholarship is to be awarded to a young man whose financial resources are such that he cannot, unaided, acquire a medical education, and whose scholarship is good. This scholarship is to be held for the full course of four years in the Medical School, subject to the standing the recipient shall maintain in scholarship and to his good conduct as a student of the School.

THE LOAN FUND OF THE MEDICAL CLASS OF 1879. The Medical Class of 1879 has given the sum of \$436.79 to be used as a loan fund to aid any student or students in the Medical School in accordance with the request of the Class, or, in the absence of such request, under the direction of the Faculty of Medicine.

Fellowships and Scholarships available in other Departments of the University as well as in the Medical School

THE FREDERICK SHELDON FUND FOR TRAVELLING FELLOWSHIPS AND SCHOLARSHIPS. The income of this Fund is available for holders of any degree from Harvard University. For further particulars, see University Catalogue for 1914–15, page 593.

THE CHARLES ELLIOTT PERKINS SCHOLARSHIP; with an income of three hundred dollars, "to be offered each year to a graduate of an Iowa College or University, in any of the graduate or professional departments of Harvard University." The terms of gift are quoted further in the University Catalogue for 1914-15, page 567.

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THE JAMES A. RUMRILL SCHOLARSHIP; with an income at present of two hundred and twenty-five dollars. This Scholarship, founded in 1909 by Mrs. James A. Rumrill, in memory of her husband, James Augustus Rumrill, of Springfield, Mass., of the Class of 1859, will be offered each year to a properly qualified graduate of a college or university in Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee or Kentucky. The terms of gift are quoted further on page 611 of the University Catalogue for 1914–15.

THE PRINCETON FELLOWSHIP; with a stipend of four hundred and fifty dollars. From a graduate of Princeton University, to be awarded to a graduate of that University studying in any department of Harvard University.

These scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of having done the best work either in this School or in a preparatory course elsewhere.

Students who have not been able to obtain scholarships often find time and opportunity to do outside work of various kinds in the city.

Information with regard to all forms of pecuniary aid may be obtained from the Director of Scholarships. The Director will aid deserving students in obtaining work. Certain loan funds not enumerated above are at his disposal. Students requiring aid should visit the Director as soon as possible to discuss with him their financial needs. The Director will also act in advisory capacity with the students in any matters not intimately associated with the curriculum.

Third-year students may apply for scholarships in January; second-year students, in February; first-year students, in March. All applications must be made before May 1.

Applications for the Cheever, Hayden, and Haven Scholarships must be handed to the Director of Scholarships on or before *December 10th*. These scholarships are open only to students who are members of the School at the time of application.

Blank forms, on which all applications for pecuniary aid must be made, may be obtained of the Director of Scholarships.

## BOYLSTON MEDICAL PRIZES

These prizes, which are open to public competition, are offered for the best dissertation on questions in medical science proposed by the Boylston Medical Committee.

For 1915 there is offered a prize of three hundred dollars and the Boylston Prize Medal, for the best dissertation on the results of original research in medicine, the subject to be chosen by the writer.

Dissertations entered for this prize must be in the hands of the Secretary, H. C. Ernst, M.D., Harvard Medical School, Boston, Mass., on or before December 31, 1915.

In awarding these prizes, preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear, in place of the author's name, some sentence or device, and must be accompanied by a sealed packet, bearing the same sentence or device, and containing within the author's name and residence.

Any clew by which the authorship of a dissertation is made known to the Committee will debar such dissertation from competition.

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:—

- That the Board does not consider itself as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.
- That, in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows of Harvard College, and consists of the following physicians: William F. Whitney, M.D., Chairman; Harold C. Ernst, M.D., Secretary; Theobald Smith, M.D., William T. Porter, M.D., Henry A. Christian, M.D., Edward H. Nichols, M.D., John Warren, M.D.

The address of the Secretary of the Boylston Medical Committee is HAROLD C. ERNST, M.D., Harvard Medical School, Boston, Mass.

William H. Thorndike Prize. — A prize of two hundred dollars will be given annually to the author of the best essay on some subject in any branch of Surgery.

The students of the Harvard Medical School and graduates of under five years' standing of any recognized medical school are eligible in competition for this prize.

Each essay must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same sentence or device, and containing within the author's name and residence. If the author is a graduate, it must also contain the date of his

graduation in medicine and the medical school from which he was graduated. Any clew by which the authorship of an essay is made known to the judges will debar such essay from the competition.

The essays must be sent to the Dean of the Harvard Medical School, Longwood Avenue, Boston, Mass., U. S. America, on or before November 1 of each year, and the award will be made annually on December 24. If no essay is considered worthy of a prize, no award will be made.

Otological Prize. — For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, a prize of twenty-five dollars is offered, open to fourth-year students.

Other Prizes.—The Bowdoin, Dante, Sumner and Toppan Prizes, offered by the Faculty of Arts and Sciences, are open to students in all departments of the University. Full particulars in regard to these prizes may be found in the University Catalogue for 1914-15, pages 536-541 and 589-592.

# SPECIAL STUDENTS

All courses, including laboratory courses, in the Harvard Medical School are open to persons not candidates for the degree of Doctor of Medicine; that is to say, to special students and to students in other Departments of the University. Hitherto such students have been registered as members of the Harvard Medical School; but, with the establishment of the Graduate School of Medicine, October 1, 1912, these special students are enrolled in the membership of that School, if they are not candidates for the degree of Doctor of Medicine. In order to be admitted to a course, the applicant must satisfy the head of the Department concerned of his fitness to pursue the work, and must be accepted as a student by the Administrative Board of the Graduate School of Medicine.

# GRADUATE SCHOOL OF MEDICINE

On October 1, 1912, graduate instruction in medicine was organized as a Department of the Faculty of Medicine of Harvard University, with a separate Dean and Administrative Board.

The object is, by better organization and the development of teaching facilities,—both clinical and laboratory,—to offer graduates in medicine opportunities to continue their studies in as thorough and scientific a manner as in the Medical School proper.

Adequate opportunities for study will be offered for those graduates who wish to review past studies and for those who wish to keep abreast of recent advances in medicine. Other courses will be offered for those who

are interested in special subjects, and the excellent opportunities for advanced study and for research in all departments of medical science will be made available for those who are qualified by previous training to undertake such work. Thus graduates in medicine, both of remote and of recent date, whether desiring fundamental reviews or in quest of the attainment of higher standards, are provided for. Graduates of recognized medical schools will be accepted as students.

While all courses are intended primarily for those who hold degrees from recognized medical schools, certain courses in the scientific subjects are adapted to the needs of advanced students and teachers of science. Such persons may be admitted to courses on the approval of the Administrative Board.

Undergraduate students of medicine may be admitted by vote of the Administrative Board to such courses as they are qualified to take. Special consideration for the needs of such students will be given in the plans for summer courses.

The laboratory facilities in the buildings of the Harvard Medical School and at some of the hospitals are available for graduate instruction, as are also abundant clinical opportunities of all kinds in the following institutions : -

Massachusetts General Hospital, Boston City Hospital, Peter Bent Brigham Hospital, Carney Hospital. Boston Dispensary, Massachusetts Eye and Ear Infirmary, Boston State Hospital, Boston Lying-in Hospital, Free Hospital for Women,

Children's Hospital, Infants' Hospital (Rotch Memorial Building), Massachusetts Babies' Hospital, McLean Hospital. Danvers State Hospital.

Clinical and laboratory instruction will be conducted in small classes so that students may receive personal attention.

The fees for separate courses vary from \$5 to \$125, according to the nature of the instruction and the duration of the course. An extra fee is required for the use of material in laboratory, dissecting, and operative courses.

Graduates seeking admission to any of the graduate courses must first register their names at the office of the Dean of the Graduate School of Medicine, where all fees are payable, and obtain a receipt to be shown at the first exercise.

For further information and full description of the courses and lectures for graduates, address the Dean of the Graduate School of Medicine, Harvard Medical School, Longwood Avenue, Boston, Mass.

# DIVISION OF STUDIES .

FOURTH-YEAR ELECTIVES	Surgery 1, 2, 3, 4, 5, and 6 Orthopedic Surgery 1 and 2 Obsterrics and Gynaecology 1 and 2 Dermatology and Syphilis 1, 2, 3, and 4 Neurology 1 and 2 Psychiatry 1 Ophthalmology 1 and 2 Obology 1, 2, and 3 Laryngology 1 and 2
	Anatomy 1, 2, 3, 4, 5, 6, and 7 Physiology 1 and 2 Comparative Physiology 1 Biochemistry 1 Bacteriology 1 Pathology 1, 2, 3, and 4 Comparative Pathology 1 Neuropathology 1 and 2 Preventive Medicine and Hygiene 1 Pharmacology 1 Medicine 1, 2, 3, and 4 Tropical Medicine 1, 2, 3, and 4 Tropical Medicine 1, 2, 3, and 6 Freetigen Ray 1 Pediatrics 1
THIRD YEAR	Medicine Surgery (written 2 lns., practical 1 hr.) Clinical Surgery (written 1 hr., practical 1 lnr.) Orthopedic Surgery Roentgenology Obstetrics Gynaccology Pediatrics Dermatology Syphilis Neurology Psychiatry Ophthalmology Otology Laryngology Laryngology Learyn Genito-Urinary Surgery
SECOND YEAR	Bacteriology Pathology Anatomy Preventive Medicine and Hygiene Pharmacology Medicine Surgery Neurology Deymatology
FIRST YEAR	Anatomy Histology and Embryology Physiology Biochemistry

Nors.—Subjects not completed in a given year are in italics. In the fourth year, electives must be chosen aggregating 1000 hours; both half-courses and quarter-courses are offered occupying 125 and 65 hours respectively.

## METHODS OF INSTRUCTION

During the first three years the following methods of instruction are adopted in the several departments:—

NOTE.—The figures at the right of the page indicate as accurately as can be ascertained the number of hours of instruction which each student receives in the different courses.

# ABBREVIATIONS USED IN THE FOLLOWING PAGES, AND IN THE TABULAR VIEWS

B.C.H. = Boston City Hospital.

B.D. = Boston Dispensary.

B.S.H. = Boston State Hospital (Pierce and Austin Farms).

B.L.H. = Boston Lying-in Hospital. Ch.H. = Children's Hospital.

E. and E.I. = Massachusetts Charitable Eve and Ear Infirmary.

F.H. for W. = Free Hospital for Women.

H.M.S. = Harvard Medical School.

H.M.H. = Huntington Memorial Hospital.

I.H. = Infants' Hospital (Rotch Memorial).

McL.H. = McLean Hospital.

M.G.H. = Massachusetts General Hospital. P.B.B.H. = Peter Bent Brigham Hospital.

P.H. = Psychopathic Hospital.

S.D.B.C.H. = South Department, Boston City Hospital.

S.O.P.D. = Surgical Out-Patient Department.

# Anatomy

-----, James Stillman Professor of Comparative Anatomy and Director of the Laboratory of Anatomy.

HARRIS P. Mosher, M.D., Assistant Professor of Laryngology and Instructor in Anatomy.

John L. Bremer, M.D., Assistant Professor of Histology.

John Warren, M.D., Assistant Professor of Anatomy.

David Cheever, M.D., Assistant Professor of Surgical Anatomy and Associate in Surgery.

Frederic T. Lewis, M.D., Assistant Professor of Embryology.

ALEXANDER S. BEGG, M.D., Instructor in Comparative Anatomy.

ROBERT M. GREEN, M.D., Instructor in Anatomy.

ARCHIBALD McK. Fraser, M.D., Assistant in Anatomy.

Walter M. Boothby, M.D., Assistant in Anatomy.

EDWARD H. RISLEY, M.D., Assistant in Anatomy.

JOHN BRYANT, M.D., Assistant in Anatomy.

TORR W. HARMER, M.D., Assistant in Anatomy.

RICHARD H. MILLER, M.D., Assistant in Anatomy.

GEORGE W. Morse, Jr., M.D., Assistant in Anatomy.

ANDREW R. MACAUSLAND, M.D., Assistant in Anatomy.

Frederick S. Hammett, S.M., A.M., Assistant in Comparative Anatomy and Teaching Fellow in Biological Chemistry.

KURT H. THOMA, D.M.D., Assistant in Dental Anatomy.

EDWIN A. BOYDEN, A.M., Teaching Fellow in Histology and Embryology.

MAX M. MILLER, A.M., Teaching Fellow in Histology and Embryology. Zabdiel B. Adams, M.D., Fellow in Anatomy.

# Paul E. Lineback, M.D., Austin Teaching Fellow in Histology and Embryology.

In this department instruction is given in Anatomy, Comparative Anatomy, Histology and Embryology. The department occupies the Morgan Anatomical Building, the dissecting rooms being in the wing designated BI, and the laboratories for Histology, Embryology, and Comparative Anatomy in the wing BII. There are separate rooms for fourth-year and graduate students and for various kinds of technical work. The class work is carried on by sections in unit rooms, which are well lighted, and thoroughly equipped. Each unit room measures twenty-three by thirty feet and is designed to accommodate twelve or twenty-four students. There is a large library which contains complete files of the most important anatomical and morphological journals, together with many standard works of reference, and in an adjoining room there is a collection of about ten thousand pamphlets. A card catalogue and a classified bibliography give ready access to the literature.

The laboratory offers exceptional facilities for work in human and comparative anatomy and embryology.

The Embryological Collection is a unique feature of the laboratory. It comprises over nineteen hundred series of sections of carefully selected vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection includes sixty series of sections from human embryos, several of which are of exceptional value, among them being two of the very youngest stages of man yet obtained. The collection of embryological models contains the standard series and many unique original models.

#### REGULAR COURSES

First Year. — This course is intended to teach the normal gross anatomy, histology, and embryology of the human body. Half of the time is devoted to work in the dissecting rooms, the other half to work in the histological and embryological laboratories. In the study of gross anatomy, each student makes a complete dissection of one side of the human body, and all of the class dissect the same part at the same time. The general order of dissection is as follows:—body-wall; lower extremity; thoracic, abdominal and pelvic cavities; upper extremity; head; neck. The study of the skeleton is carried on with the dissection. The lectures and demonstrations are arranged to follow closely the work in the dissecting room.

The part of the course dealing with microscopic anatomy is a study of cells, tissues, and organs, from the developmental standpoint. Cell structure and the fundamental tissues are considered first. This is followed by a study of chick embryos of 30 and 48 hours and pig embryos of 20 days, in which special stress is laid on the origin and growth of the different organs. During the remainder of the course the organs of the adult are studied in succession. In connection with the uterus, the human placenta and fetal membranes are considered. The month of January is devoted to the central nervous system and sense organs.

Microscopes. — Every student is advised to purchase a microscope, but microscopes may be rented at four dollars for the term.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 68.

#### FIRST YEAR

October, November, December, and January Hours

Lectures. Asst. Professors Lewis, Warren, and Bremer. Eleven lectures a week, nine hours.

Demonstrations. To sections of the class, at the pleasure of the instructors.

Laboratory work. Six and one-half hours, five times a week. 520

Second Year. — The second-year course in anatomy will be given during February and March. The class will be divided into sections and each section will have approximately four hours per week. The work will consist chiefly of the careful study and drawing of frozen sections and of dissections and specimens of various sorts. There will also be a certain number of lectures or demonstrations on applied anatomy to emphasize those practical details which are essential for clinical work. The work in the laboratory is planned to be carried on in close coöperation with the clinical studies in medicine and surgery.

#### SECOND YEAR

# February and March

Lectures, demonstrations, and laboratory work to sections of the class, four hours per week.

#### INVESTIGATION

Special accommodations are furnished in the laboratory for students who wish to pursue special or advanced work. Special facilities are offered to original investigators, who will receive such personal aid as may be necessary or advantageous.

A special course in vertebrate embryology is given during the second term; this has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments.

# Physiology

Walter B. Cannon, M.D., George Higginson Professor of Physiology.

Ernest G. Martin, Ph.D., Assistant Professor of Physiology.

Percy G. Stiles, Ph.D., Instructor in Physiology.

Alexander Forbes, M.D., Instructor in Physiology.

James R. Martin, Ph.B., Teaching Fellow in Physiology.

Walter L. Mendenhall, M.D., Teaching Fellow in Physiology.

McKeen Cattell, S.B., Teaching Fellow in Physiology.

Reginald Fitz, M.D., Fellow in Physiology.

Eugene L. Porter, Ph.D., Research Fellow in Physiology.

# FRANK A. HARTMAN, Ph.D., Austin Teaching Fellow in Physiology.

First Year. — The instruction in Physiology is based, as far as possible, on observations made by the students in laboratory experiments. The experiments are selected to impress the student with the methods and the most important facts in the various divisions of the subject. Physiological processes not readily observed in the laboratory the student learns with an insight derived from practical experience in experimentation. The arrangement of the experiments is in general such that the student first learns of what activity an organ or tissue is capable, next how certain factors condition or modify that activity, and finally what may be the effect of the activity. The experiments have also been so arranged as to place those with more general bearing first, and those with special interest later. Thus reference to previously acquired information becomes more and more possible as the course proceeds.

The amount of time devoted to laboratory exercises is approximately one hundred and sixty hours. Each student is required to preserve a

record of his experiments and observations in a laboratory note-book. These records are examined and criticised.

Observations of his own experiments by the student are supplemented by more than thirty special demonstrations. These exercises, some of which are performed by students under the direction of an assistant, are closely correlated with the other objective instruction. The function of the depressor nerve, motor localization in the cerebral cortex, the action of secretin and of enterokinase, and the effects of lymphagogues are examples of subjects which are demonstrated.

The facts observed in the laboratory and in the demonstrations are discussed in lectures and theses. The lectures, about ninety in number, are informal discussions permitting questions by the students or by the instructor. In these discussions the laboratory experiments are correlated with one another and with the body of physiological knowledge. Supplementing the lectures are the theses. A thesis in Physiology, based upon reading of the records of original investigations, is required of each student. The Bowditch Library of Physiology and Biological Chemistry, containing about four thousand volumes and about twelve thousand reprints, is open to students for reference and reading. Wednesday morning of each week is largely devoted to work in the Library. Some of the theses, which are closely related to the regular instruction, are presented before the class. Among those read publicly during the past academic years were: Colorblindness, Heart-block, Physiological economy of nutrition, Natural defenses of the organism.

In order that students shall review the work repeatedly as the course proceeds, and also that the instructors may judge the efficiency of the teaching, the class is quizzed orally every week by the instructing staff. Usually at the end of each general division of the subject, as, for example, the nervous system, or the circulation, a written test is given. The examination books are returned, corrected, to the students. Five questions are asked; as examples the following are illustrative: What are the effects of stimulating the vasoconstrictor nerves of any particular organ? Cite morphological and physiological evidence for segmental arrangement of the nervous system. Discuss cortical localization.

If in the quizzes and tests many students show that certain points are not clearly understood, these points are briefly discussed again before the class. If a student reveals by his answers general failure to grasp the subject intelligently, he is personally conferred with regarding the character of his work. Such conferences are held after the first six weeks of the course, and usually result in a better understanding between the instructor and the student, and frequently in a marked improvement in the student's efforts.

Students who have had, before entering this course, a large part of the laboratory work or much laboratory experience may be permitted to cooperate with members of the staff in special investigations. Such students are excused from the preparation of theses.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 69.

# FIRST YEAR (Second half) HOURS Laboratory experiments. Professor Cannon, Asst. Professor Mar-TIN, Drs. Stiles, MENDENHALL, FITZ, and Messrs. CATTELL and HARTMAN. Daily. 176 Quizzes (14). One hour Saturdays. 14 Written tests (5). One hour Mondays. 5 Lectures (90). Professor Cannon, Asst. Professor Martin, Drs. FORBES and STILES. 90 Special demonstrations (30). Professor Cannon and Dr. Forbes. 15 Discussion of Theses (30). 10 Thesis. Written by each student from the original sources. Reading of investigations. The reading of investigations and the discussion of these at the appropriate conference.

#### INVESTIGATION

Any student, properly qualified, who desires to engage in physiological research will be welcomed into the laboratory and will be offered every facility for research which the laboratory affords.

# Comparative Physiology

- WILLIAM T. PORTER, M.D., LL.D., Professor of Comparative Physiology.
- I. Physiological Research. Students qualified for research will pursue their investigations under the immediate direction of the professor in charge.
- II. Comparative Physiology of Muscle. Professor Porter. Three hours weekly during February and March.
- III. Physiological Conference. Professor Porter. Demonstrations with informal discussions of selected problems in physiology. Mondays and Thursdays, 5 to 6 P.M., throughout the year.

Fourth Year. - For a description of the fourth-year courses offered in this department, see page 70.

# Biological Chemistry

Otto Folin, Ph.D., Hamilton Kuhn Professor of Biological Chemistry. LAWRENCE J. HENDERSON, M.D., Assistant Professor of Biological Chemistry.

Walter R. Bloor, Ph.D., Assistant Professor of Biological Chemistry. Cyrus H. Fiske, M.D., Assistant in Biological Chemistry.

EDWARD P. PHELPS, S.M., Assistant in Biological Chemistry.

THEODORE F. ZUCKER, S.M., Assistant in Biological Chemistry.

FREDERICK S. HAMMETT, A.M., Assistant in Comparative Anatomy and Teaching Fellow in Biological Chemistry.

HENRY LYMAN, M.D., Fellow in Biological Chemistry.

RICHARD D. Bell, M.D., Fellow in Biological Chemistry.

GOODWIN LEB. FOSTER, A.B., Austin Teaching Fellow in Biological Chemistry.

First Year. — The lectures in this course consist of a brief discussion of the theories of chemical constitution and a survey of those classes of chemical substances which are to be found in animals and plants, and of the general principles and more important facts of physiological chemistry.

The laboratory practice is designed to acquaint the student with some of the more important constituents of living matter and their chemical behavior, and with some of the routine methods of Biochemical investigation.

Conferences and discussions of selected topics supplement the main work of the course.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 70.

# FIRST YEAR (Second half)

HOURS

Lectures. Professor Folin and Asst. Professor Bloom. One hour, five times a week. 80

Laboratory work. Professor Folin, Asst. Professor Bloor, Dr. Fiske, and Messrs. Phelps, Zucker, Hammett, and Foster. Two and one-half hours, five times a week. 200

# Bacteriology

HAROLD C. ERNST, M.D., Professor of Bacteriology.

S. Burt Wolbach, M.D., Associate Professor of Bacteriology.

CALVIN G. PAGE, M.D., Instructor in Bacteriology.

ALBERT E. STEELE, M.D., Instructor in Bacteriology.

CLEAVELAND FLOYD, M.D., Instructor in Bacteriology.

HENRY J. PERRY, M.D., Assistant in Bacteriology.
HORACE K. BOUTWELL, M.D., Assistant in Bacteriology.
LESLEY H. SPOONER, M.D., Assistant in Bacteriology.
JAMES A. HONEIJ, M.D., Fellow in Bacteriology.
JOHN W. HAMMOND, M.D., Fellow in Bacteriology.

RICHARD S. AUSTIN, M.D., Austin Teaching Fellow in Bacteriology.

Second Year. — Required bacteriology is taught by lectures and practical laboratory work. The lectures treat of the general subject and of methods of practical work. In the laboratory each student has an opportunity to become familiar with the simpler methods of manipulation and staining which are of especial clinical value, and with the more prominent of the pathogenic bacteria.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 70.

#### SECOND YEAR

HOURS

Lectures. Professor Ernst. Daily, except Saturdays, during October and November. 40

Laboratory work. Professor Ernst, and Drs. Påge, Steele, Perry, Boutwell, and Floyd. Two to three hours daily during October and November.

# Pathology

WILLIAM T. COUNCILMAN, M.D., LL.D., Shattuck Professor of Pathological Anatomy.

FRANK B. MALLORY, M.D., Associate Professor of Pathology.

James H. Wright, M.D., S.D., Assistant Professor of Pathology.

ERNEST E. TYZZER, M.D., Assistant Professor of Pathology.

FREDERICK H. VERHOEFF, M.D., Instructor in Ophthalmic Pathology.

JAMES E. ASH, M.D., Instructor in Pathology.

WARREN R. SISSON, M.D., Instructor in Pathology.

John E. Dwyer, Jr., M.D., Assistant in Pathology.

ALBERT A. W. GHOREYEB, M.D., Assistant in Pathology.

Second Year. — The course in Pathology consists of laboratory work and lectures. The basis of the laboratory work is the systematic course in pathological histology. In connection with this there are demonstrations of material bearing on the subjects studied and experiments. In this work the students are divided into small sections. The demonstrations are given to these sections and the experimental work on anaesthetized

animals is carried out by the sections under the direction and supervision of Dr. Ash, who has charge of this branch of the work. onstrations and experimental work are given in rooms adjoining the main laboratory which are adequately provided with apparatus. Both the demonstrations and experiments are in connection with the subjects which are being studied. Lectures are given five days in the week, the object of the lectures being rather to expand and coordinate the knowledge which the student is acquiring by his study of material than to impart new information. During the entire period of the course groups of students are sent to the various hospitals to see and assist in post-mortem examinations. Each group prepares microscopical specimens of the tissues from the autopsy, which are studied under direction and described. No attempt is made to separate the subject of Pathology into general pathology and pathological anatomy, but the subject is studied as a whole. In teaching the student is taught methods of work, is given material, and directed; but he is taught to work independently. Tumors and other material coming from the surgical clinics are made full use of in the course.

On Saturdays conferences and recitations are substituted for the regular laboratory work.

In the forenoons of the second and third weeks of December, Professor T. Smith gives a course of lectures and laboratory exercises on animal parasites, particularly the protozoa and the infections produced by them.

During the afternoons of December and January two courses are given in the special pathology of neurology and surgery; the courses constitute a valuable introduction to the clinical work required in these subjects in the third year.

These courses are :-

- (a) Fifteen demonstrations and laboratory exercises on the pathology of the nervous system. (See Neurology.)
- (b) Twenty laboratory exercises in surgical pathology. (See Surgery.)

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 71.

#### SECOND YEAR

HOURS

Lectures. Professor Councilman. Daily for fourteen weeks, October, November, December (first week only), and January. 84

Laboratory work. Professor Councilman, Drs. Ash and Sisson. Three hours daily during the forenoons of October, November, December (first week only), and January.

Demonstrations and laboratory work. Professor T. Smith. Two hours daily, second and third weeks of December. 24

Demonstration of autopsy material. Dr. J. H. Wright. (M.G.H.) One hour a week.

Neuropathology. Professor Southard. Afternoons in December. 45 Surgical Pathology. Associate Professor Nichols. Afternoons in January. 36

# Legal Medicine

GEORGE B. MAGRATH, M.D., Instructor in Legal Medicine.

Second Year.— (1) Demonstrations of the pathological conditions met with in death following injuries of various sorts, and in sudden death, in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital, during the forenoons of the first half-year, to sections assigned by the Pathological Department upon notification from Dr. Magrath.

(2) Instruction in the technique of medico-legal post-mortem examinations to be given coincidentally with (1).

Fourth Year. — Optional course; second half-year. (1) Instruction in the pathological conditions met with in death following injury, and in sudden death, by the case method, with special reference to the clinical and the medico-legal aspects in each case. Exercises based on autopsy, with discussion of the case, and held in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital.

(2) Legal Medicine: medicine in its relation to the requirements of law. Systematic lectures (not less than twelve) dealing with matters of importance to the physician, alike as practitioner and as a witness in court.

# Comparative Pathology

Theobald Smith, M.D., LL.D., S.D., George Fabyan Professor of Comparative Pathology.

Marshal Fabyan, M.D., Instructor in Comparative Pathology.

J. Howard Brown, S.M., Assistant in Comparative Pathology.

CARLON TENBROECK, M.D., Assistant in Comparative Pathology.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 72.

#### SECOND YEAR

Lectures. Professor T. Smith. (H.M.S.) One hour daily, second and third weeks of January.

Demonstrations and laboratory work. Professor T. Smith, Assistant Professor Tyzzer, and Dr. Fabyan. Two hours daily, second and third weeks in December.

# Preventive Medicine and Hygiene

- MILTON J. ROSENAU, M.D., Professor of Preventive Medicine and Hugiene.
- EDWARD G. BIRGE, M.D., Instructor in Preventive Medicine and Hugiene.
- Francis B. Grinnell, M.D., Assistant in Preventive Medicine and Hygiene, and Charles Follen Folsom Teaching Fellow in Hygiene.

Second Year. — The instruction consists of lectures, demonstrations, and laboratory work.

Fourth Year. - For a description of the fourth-year course offered in this department, see page 73.

#### SECOND YEAR

HOTES

Lectures, demonstrations, and laboratory work. Professor Rosenau and assistants. Three times a week, second half-year. 48

# Pharmacology

Reid Hunt, M.D., Professor of Pharmacology. WORTH HALE, M.D., Assistant Professor of Pharmacology.

Courses in pharmacology are given in the second and in the fourth years. In the second year the instruction is given by lectures, recitations, demonstrations, and a laboratory course in which the students have an opportunity of learning the physical and chemical properties of the most important drugs and of performing experiments illustrating the physiological actions of a number of these. A few exercises are given in pharmacy and materia medica, the work consisting of demonstrations and practical exercises. Some attention is also given to toxicology. During the fourth year an opportunity is offered to students of doing more advanced work in experimental pharmacology.

Fourth Year. - For a description of the fourth-year course offered in this department, see page 73.

#### SECOND YEAR

Lectures and demonstrations. Professor Hunt and Asst. Professor Hale. One hour, three times a week, second half-year. 48 32

Laboratory work. Two hours, twice a week, second half-year.

#### Medicine

GEORGE G. SEARS, M.D., Clinical Professor of Medicine.

DAVID L. EDSALL, M.D., S.D., Jackson Professor of Clinical Medicine.

Henry A. Christian, M.D., Hersey Professor of the Theory and Practice of Physic.

RICHARD C. CABOT, M.D., Assistant Professor of Medicine.

ELLIOTT P. JOSLIN, M.D., Assistant Professor of Medicine.

WILLIAM H. SMITH, M.D., Instructor in Medicine.

THOMAS ORDWAY, M.D., Instructor in Medicine.

CHANNING FROTHINGHAM, Jr., M.D., Instructor in Medicine.

HENRY F. HEWES, M.D., Instructor in Medicine.

FRANKLIN W. WHITE, M.D., Instructor in Medicine.

WILLIAM H. ROBEY, Jr., M.D., Instructor in Medicine.

JOSEPH H. PRATT, M.D., Instructor in Medicine.

EDWIN A. LOCKE, M.D., Instructor in Medicine.

FREDERICK T. LORD, M.D., Instructor in Medicine.

RALPH C. LARRABEE, M.D., Assistant in Medicine.

FRANCIS W. PALFREY, M.D., Assistant in Medicine.

WILLIAM B. ROBBINS, M.D., Assistant in Medicine.

GERALD BLAKE, M.D., Assistant in Medicine.

CHARLES L. OVERLANDER, M.D., Assistant in Medicine.

ALBERT A. HORNOR, M.D., Assistant in Medicine.

CHARLES H. LAWRENCE, Jr., M.D., Assistant in Medicine.

WILLARD S. PARKER, M.D., Assistant in Medicine.

Louis H. Newburgh, M.D., Alumni Assistant in Medicine.

I. CHANDLER WALKER, M.D., Alumni Assistant in Medicine.

JOHN L. OVERLANDER, M.D., Fellow in Medicine.

WALTER W. PALMER, M.D., Fellow in Medicine.

ALFRED LUGER, M.D., Fellow in Medicine.

JAMES P. O'HARE, M.D., Fellow in Medicine.

PAUL D. WHITE, M.D., Fellow in Medicine.

James H. Means, M.D., Henry P. Walcott Fellow in Clinical Medicine.

The instruction given by the Department of Medicine consists of both clinical and laboratory work. The clinical work is given by means of lectures, clinical lectures, and practical work in the Out-Patient Department and wards of the hospitals. Laboratory work is given at the Harvard Medical School in the laboratory of the Department. The laboratories are equipped for teaching routine clinical laboratory methods to the entire class, as well as for carrying on clinical or experimental medical research.

The general plan of the work will be to instruct the students during the second half of the second year in the methods of history-taking, physical examination, and clinical laboratory technique, to drill the students in the third year as assistants in the Out-Patient Departments of the hospitals, and in the fourth year to give them continued contact with patients by having them serve as clinical clerks in the hospital wards. Much of this work will be conducted in small sections, while lectures and clinical lectures will be given for the class with the view of presenting to the students a more comprehensive knowledge of medicine. This instruction will be in part at the Harvard Medical School, in part at the Peter Bent Brigham Hospital, the Massachusetts General Hospital, the Boston City Hospital, and several of the special hospitals. In these hospitals an abundant and varied clinical material is available for the conduct of these various exercises.

Second and Third Years.—Lectures and recitations. Lectures and recitations on selected topics will be given at the Medical School.

Clinical Lectures.—Clinical lectures in which the students are called upon to take an active part will be given in the amphitheatre of the Peter Bent Brigham Hospital, the Massachusetts General Hospital, and the Boston City Hospital.

Clinical Exercises. — Small sections of the class will be drilled thoroughly in the hospitals in the taking of histories, methods of physical examination, and in the examination of urine, blood, sputum, and gastric contents.

Laboratory. — Students will be instructed and exercised in the chemical, microscopical, and bacteriological methods used in the practice of medicine. It is expected that each student by frequent opportunity will attain the necessary proficiency to enable him to utilize these methods in the diagnosis and prognosis of disease.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 73.

#### SECOND YEAR

HOURS

Lectures on selected topics. Professor Christian. (H.M.S.) Twice a week, second half-year. 32

Clinical lectures. Professor Sears. (B.C.H.) Once a week, second half-year.

Lectures. Professor Edsall. (M.G.H.) Once a week, second half-year.

Exercises in sections, conducted by eight assistants under the general supervision of Dr. Robey. Each student has fifty-two exercises, supplemented by demonstrations and recitations for the entire class.

Laboratory exercises.	Dr. Hewes and assistants.	Three	times	a	week,
second half-year.	Two hour periods.				96

#### THIRD YEAR

Lectures on selected topics. Professor Christian. (P.B.B.H.) Twice a week, first half-year.

Case teaching, exercises and discussion of selected topics. Asst. Professor Cabot. (H.M.S.) Twice a week, second half-year. 32

Lectures on applied therapeutics. Professor Sears. (H.M.S.) Once a week, second half-year.

Clinical lectures. Professor Christian. (P.B.B.II.) Once a week throughout the year.

Clinical lectures. Professor Edsall (M.G.H.) and Professor Sears (B.C.H.). Once a week throughout the year.

Exercises in sections as student assistants in the Out-patient Departments at the M.G.H., B.C.H., or P.B.B.H. Each section has forty-eight exercises of three hours each.

# FOURTH YEAR

A two-month service as clinical clerk in the wards of the M.G.H., B.C.H., or P.B.B.H. is required of each student.

# Tropical Medicine

RICHARD P. STRONG, M.D., Professor of Tropical Medicine, will supervise the instruction in Tropical Medicine. Professors Harold C. Ernst, Theobald Smith, Milton J. Rosenau, and Henry A. Christian will constitute an Advisory Board.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 74.

# Surgery

The Department of Surgery includes surgery, clinical surgery, operative surgery, surgical pathology, surgical technique, genito-urinary surgery, Roentgenology, and the laboratory of surgical research.

HARVEY CUSHING, M.D., F.R.C.S., Moseley Professor of Surgery.

EDWARD H. NICHOLS, M.D., Associate Professor of Surgery.

Charles A. Porter, M.D., Associate Professor of Surgery.

Paul Thorndike, M.D., Assistant Professor of Genito-Urinary Surgery.

J. Bapst Blake, M.D., Assistant Professor of Surgery.

HOWARD A. LOTHROP, M.D., Assistant Professor of Surgery.

ROBERT B. GREENOUGH, M.D., Assistant Professor of Surgery.

Hugh Cabot, M.D., Assistant Professor of Genito-Urinary Surgery.

David Cheever, M.D., Assistant Professor of Surgical Anatomy and Associate in Surgery.

JAMES S. STONE, M.D., Instructor in Surgery.

WALTER J. DODD, M.D., Instructor in Roentgenology.

Charles L. Scudder, M.D., Associate in Surgery.

WILLIAM E. FAULKNER, M.D., Associate in Surgery.

FARRAR COBB, M.D., Associate in Surgery.

Joshua C. Hubbard, M.D., Associate in Surgery.

Daniel F. Jones, M.D., Associate in Surgery.

JOHN HOMANS, M.D., Associate in Surgery.

Samuel J. Mixter, M.D., Lecturer in Surgery.

FRED B. LUND, M.D., Lecturer in Surgery.

FREDERIC J. COTTON, M.D., Lecturer in Surgery.

Ernest A. Codman, M.D., Lecturer in Surgery.

FREEMAN ALLEN, M.D., Lecturer in Anaesthesia.

Frank L. Richardson, M.D., Lecturer in Anaesthesia.

Walter M. Boothby, M.D., Lecturer in Anaesthesia.

Samuel W. Ellsworth, M.D., Assistant in Roentgenology.

LEROI G. CRANDON, M.D., Assistant in Surgery.

Walter C. Howe, M.D., Assistant in Surgery.

CHANNING C. SIMMONS, M.D., Assistant in Surgery.

Percy Brown, M.D., Assistant in Roentgenology.

Horace Binney, M.D., Assistant in Genito-Urinary Surgery.

Beth Vincent, M.D., Assistant in Surgery.

J. Dellinger Barney, M.D., Assistant in Genito-Urinary Surgery.

CONRAD JACOBSON, M.D., Assistant in Surgery.

WYMAN WHITTEMORE, M.D., Assistant in Surgery.

George W. Holmes, M.D., Assistant in Roentgenology.

EDWARD P. RICHARDSON, M.D., Assistant in Surgery.

EMIL GOETSCH, M.D., Assistant in Surgery.

IRVING J. WALKER, M.D., Assistant in Surgery.

Halsey B. Loder, M.D., Assistant in Surgery.

Alfred Luger, M.D., Assistant in Roentgenology.

GEORGE A. LELAND, Jr., M.D., Alumni Assistant in Surgery.

HARRY F. HARTWELL, M.D., Fellow in Surgery.

MARK H. WENTWORTH, M.D., Fellow in Surgery. -

WILLIAM J. BRICKLEY, M.D., Fellow in Surgery.

Ernest G. Crabtree, M.D., Fellow in Surgery.

GILBERT HORRAX, M.D., Arthur Tracy Cabot Fellow in Charge of the Laboratory of Surgical Research. Instruction will be given by lectures, clinical lectures, demonstrations, and recitations, together with section teaching in the laboratories of surgical pathology and of surgical research, and in the wards and out-patient departments of the hospitals. Elective courses will be given in the laboratories of the Harvard Medical School, and in the wards and operating rooms of the hospitals.

Lectures and demonstrations in the use of the Roentgen Ray will be given in connection with all of the departments of the School when such instruction is desired by the head of the individual department. Arrangements can be made for such instruction with the Instructor in Roentgenology.

Second Year. — The course in surgery begins in January of the second year. The afternoons in January will be given to surgical pathology, and to surgical therapeutics on alternate days. Laboratory exercises in surgical pathology will be given three days a week, in which will be studied the healing of wounds, fractures, diseases of the bones and joints, and such aspects of pathology as are of special surgical importance. Two clinical lectures a week, illustrating the lesions studied in the laboratory of surgical pathology, will be given at the Boston City Hospital. On two days a week the class will be divided into two sections for practical exercises in surgical therapeutics.

The systematic course of lectures, clinical lectures, demonstrations and recitations will begin in February of the second year - one lecture, one recitation and two clinical lectures a week. In the first two weeks the lectures and clinics will be devoted to surgical therapeutics. The general principles of surgery, beginning with trauma, hemorrhage, sepsis, etc., will be taken up in successive weeks, and illustrated by clinical lectures and demonstrations, until the end of the second half of the second year. During the first nine weeks of the second half of the second year, beginning February 1, section work in surgical technique will be given. Each student will have twelve laboratory exercises of two hours each, on the application of bandages and surgical apparatus, and the preparation and use of surgical material and dressings. Additional exercises will be given in sections, in the hospitals, on the practical application of bandages and surgical appliances. This course in surgical technique is designed to prepare the student for the required two months' "dresser" service in the surgical out-patient department of the Massachusetts General Hospital or the Boston City Hospital. Satisfactory service in this capacity during the third year is a necessary requirement for the degree.

Third Year. — During the third year, one lecture, one recitation, and two clinical lectures a week will be given throughout the year. On Wednesday a lecture will be given at the Brigham Hospital at 12.30 p.m., for

the whole class. On Tuesday at 12 m. two clinical lectures will be given, one at the Boston City Hospital and one at the Massachusetts General Hospital, either of which may be attended by the student having section work at one or the other hospital. During May twelve surgical hours, in morning and in afternoon exercises, will be devoted to genito-urinary surgery. During the two months' required out-patient "dresser" service, sections of the class will be assigned to short terms of service in the Genito-Urinary Departments.

Fourth Year. — Opportunity is afforded in the fourth-year elective courses for practical work in the wards and operating rooms of the hospitals, P.B.B.H., M.G.H., B.C.H., and C.H. For a description of the fourth-year courses offered by this department, see page 78.

#### SECOND YEAR

HOURS

- Laboratory course in Surgical Pathology. Associate Professor Nichols.

  (H.M.S.) Twelve three-hour exercises during January. 36

  Laboratory course in Surgical Therapeutics. Professor Cushing and Associates. (H.M.S.) Eight three-hour exercises during January. 24
  - Clinical lectures in connection with the course in Surgical Pathology.

    Associate Professor Nichols. (B.C.H.) Eight exercises during

    January. 8
  - Clinical lectures in Surgical Therapeutics. Professor Cushing. (P.B. B.H.) Four exercises during January.
  - Laboratory course in Surgical Therapeutics. Associate Professor Porter and Assistant Professor Lothrop and assistants. Eighteen two-hour exercises for each student during the second half of the second year. 36
- Lectures and demonstrations. Professor Cushing, Associate Professors Nichols and Porter, and Associates. (H.M.S.) Once a week, second half-year.
- Recitations. Assistant Professors Lothrop and Greenough. Once a week, second half-year.
- Clinical lectures. Associate Professor Porter and Assistant Professor Greenough (M.G.H.), Associate Professor Nichols and Assistant Professors Lothrop and Blake (B.C.H.). Twice a week, second half-year.

#### THIRD YEAR

- Lectures and demonstrations. Professor Cushing, Associate Professors
  Porter and Nichols, and Associates. Once a week, first and second
  half-year. 32
- Clinical lectures. Professor Cushing. (P.B.B.H.) Once a week, first and second half-year. 32

Clinical lectures given contemporaneously at the M.G.H. and B.C.H.

Associate Professor Porter and Assistant-Professor Greenough
(M.G.H.) or Associate Professor Nichols and Assistant Professors

Lothrop and Blake (B.C.H.). Once a week, first and second halfyear.

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(During May of the third year, four morning and eight afternoon exercises will be devoted to genito-urinary surgery. Assistant Professor Hugh Cabot. (H.M.S. and M.G.H.))

Recitations. Assistant Professors Lothrop and Greenough. (H.M.S.)

Once a week, first half-year.

Case teaching. Assistant Professor Blake. (H.M.S.) Once a week, beginning February 1st.

Out-patient Surgical Dresser Service. Exercises in sections. Each student has forty-eight exercises of three hours each. 144

# Orthopedic Surgery

ROBERT W. LOVETT, M.D., Professor of Orthopedic Surgery.
ELLIOTT G. BRACKETT, M.D., Associate in Orthopedic Surgery.
AUGUSTUS THORNDIKE, M.D., Associate in Orthopedic Surgery.
ROBERT SOUTTER, M.D., Instructor in Orthopedic Surgery.
ROBERT B. OSGOOD, M.D., Instructor in Orthopedic Surgery.
HENRY J. FITZSIMMONS, M.D., Fellow in Orthopedic Surgery.

Third Year. — Orthopedic Surgery is taught in the first half of the third year and consists of a series of lectures and demonstrations at the Medical School, and of clinical exercises at the Children's and Massachusetts General Hospitals.

Fourth Year. — For a description of the fourth-year courses offered by this department, see page 79.

#### THIRD YEAR

HOURS

Lectures and demonstrations. Orthopedic Surgery. Professor Lovett, and Drs. Brackett, A. Thorndike, Soutter, and Osgood. (H.M.S. and Ch.H.) Every other week, second half-year.

# Obstetrics and Gynaecology

Charles M. Green, M.D., Professor of Obstetrics and Gynaecology.

WILLIAM P. GRAVES, M.D., Professor of Gynaecology.

Franklin S. Newell, M.D., Assistant Professor of Obstetrics and Gynaecology.

MALCOLM STORER, M.D., Instructor in Gynaecology.

Ernest B. Young, M.D., Instructor in Gynaecology.

Howard T. Swain, M.D., Instructor in Obstetrics.

James R. Torbert, M.D., Assistant in Obstetrics.

NATHANIEL R. MASON, M.D., Assistant in Obstetrics and Gynaecology.

ROBERT L. DENORMANDIE, M.D., Assistant in Obstetrics.

HENRY T. HUTCHINS, M.D., Assistant in Gynaecology.

ROBERT M. GREEN, M.D., Assistant in Obstetrics and Gynaecology.

RAYMOND B. PARKER, M.D., Alumni Assistant in Obstetrics.

RICHARD G. WADSWORTH, M.D., Fellow in Gynaecology.

John T. Williams, M.D., Fellow in Gynaecology.

James L. Huntington, M.D., Fellow in Gynaecology.

FRANK A. PEMBERTON, M.D., Fellow in Gynaecology.

#### OBSTETRICS

Third Year.—Instruction is given by lectures, conferences, and clinical teaching. Students are required to take charge of at least six cases of labor, under supervision and instruction, to care for their patients during the convalescence, and to make full written reports of the cases. Many of these reports are read at the conferences and discussed by the class and the instructors.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 80.

#### SECOND YEAR

HOURS

Lectures. Professor Green. (H.M.S.) Once a week, second half-year.

#### THIRD YEAR

Lectures and conferences on Obstetrics. Professor Green and assistants.

(H.M.S.) Twice a week, first half-year. Once a week, second half-year.

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Practical instruction in Clinical Obstetrics. Drs. Swain, Torbert, Mason, Denormandie, R. M. Green, and Parker. Throughout the year.

# GYNAECOLOGY

Third Year.—Instruction is given by lectures, recitations, and clinical teaching. Clinics are held in the out-patient departments of the Boston City Hospital, the Boston Dispensary, and the Free Hospital for Women, and the student is instructed in diagnosis, and in the treatment of ambulatory cases.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 80.

#### THIRD YEAR

HOURS

Lectures. Professors Green and Graves. (H.M.S.) Every other week, second half-year.

Clinical exercises. Professor Graves, and Drs. Hutchins, Wadsworth, and Pemberton (F.H. for W.), Dr. Storer (B.D.), and Drs. Mason, R. M. Green, Williams, and Huntington (B.C.H.). In sections, throughout the year. Each student attends six exercises. 18

# **Pediatrics**

John L. Morse, M.D., Associate Professor of Pediatrics.

EDWIN H. PLACE, M.D., Assistant Professor of Pediatrics.

MAYNARD LADD, M.D., Instructor in Pediatrics.

CHARLES H. DUNN, M.D., Instructor in Pediatrics.

HENRY I. BOWDITCH, M.D., Clinical Instructor in Pediatrics.

FRITZ B. TALBOT, M.D., Clinical Instructor in Pediatrics.

ARTHUR A. HOWARD, M.D., Clinical Instructor in Pediatrics.

PHILIP H. SYLVESTER, M.D., Assistant in Pediatrics.

RICHARD M. SMITH, M.D., Assistant in Pediatrics.

JAMES H. YOUNG, M.D., Assistant in Pediatrics.

HENRY F. KEEVER, M.D., Assistant in Pediatrics.

WILLIAM W. HOWELL, M.D., Fellow in Pediatrics.

HAROLD A. GALE, M.D., Fellow in Pediatrics.

THEODORE W. ELY, M.D., Fellow in Pediatrics.

Third Year. — The material for instruction is drawn from the Infants' Hospital, the Children's Hospital, the South Department of the Boston City Hospital, and from the Children's Departments of the Massachusetts General Hospital and the Boston Dispensary. Lectures are given on such selected topics as development, living anatomy, the dietetics of early life, diphtheria, the exanthemata, and the gastro-enteric diseases, preparatory for the clinical teaching. Clinical lectures are given at the Children's Hospital and at the Infants' Hospital; and the students are required to take an active part in the examination and discussion of the cases. Sectional teaching at the bedside both at the Children's and Infants' Hospitals is given throughout the year and comprises a large proportion of the year's instruction. Bedside instruction and clinical lectures are given at the South Department of the Boston City Hospital, where the students are shown and examine cases of diphtheria, the acute exanthemata and any other contagious diseases which happen to be in the hospital. According as the opportunity arises, the students are instructed in the technique of intubation. By means of the very large amount of Pediatric material in the contagious wards, the general subject of Pediatrics as connected with contagious diseases is especially explained and illustrated. Exercises in case teaching are given in the latter part of the year preparatory for the examination. At the Children's Hospital the students are given instruction in lumbar puncture and in the serum examinations and other diagnostic methods. In all clinical and sectional teaching especial attention is paid to clinical therapeutics.

#### THIRD YEAR

HOURS

- Lectures. Associate Professor Morse and assistants. (H.M.S.) Once a week throughout the year. 32
- Clinical lectures. Associate Professor Morse and assistants. (Ch.H.)

  Once a week throughout the year. 32
- Section Teaching. (Ch.H., I.H., and S.D.B.C.H.) Throughout the year. Each student attends twenty-four exercises during the year. 72

# Dermatology and Syphilis

ABNER POST, M.D., Professor of Syphilis.

Charles J. White, M.D., Assistant Professor of Dermatology.

C. MORTON SMITH, M.D., Instructor in Syphilis.

Frederick S. Burns, M.D., Instructor in Dermatology.

E. LAWRENCE OLIVER, M.D., Assistant in Dermatology.

#### DERMATOLOGY

Third Year.—A course of clinical lectures, clinical exercises, and half-hour examinations and quizzes extending throughout the year.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 81.

#### SECOND YEAR

HOURS

Clinical lectures. Assistant Professor White. (M.G.H.) Once a week, second half-year. 16

# THIRD YEAR

Lectures on the Anatomy and Therapeutics of the Skin. (Illustrated.)
Assistant Professor White. (H.M.S. and M.G.H.) Every other
week, second half-year.

Section work (clinical exercises). Drs. Burns and Oliver. (M.G.H.)

Each student attends twelve exercises.

# SYPHILIS

Third Year. — Lectures and clinical instruction are given at the Massachusetts General Hospital.

## THIRD YEAR

HOURS

Lectures. Professor Post. (H.M.S.) Every-other week, second halfyear. 8

Clinical lectures. Professor Post and Dr. Smith. (M.G.H.) Once a week, September 29 to November 23.

Clinical exercises. Professor Post and Dr. Smith. (M.G.H.) Each student attends six exercises, in sections.

# Diseases of the Nervous System

The Department of Diseases of the Nervous System is composed of the sub-departments of Neuropathology, Neurology, and Psychiatry.

Elmer E. Southard, M.D., Bullard Professor of Neuropathology.

EDWARD W. TAYLOR, M.D., Assistant Professor of Neurology.

HERMAN M. ADLER, M.D., Assistant Professor of Psychiatry.

GEORGE A. WATERMAN, M.D., Instructor in Neurology.

James B. Ayer, M.D., Assistant in Neuropathology and Neurology.

GEORGE CLYMER, M.D., Assistant in Neurology.

HAROLD I. GOSLINE, M.D., Assistant in Neuropathology.

HARRY C. SOLOMON, M.D., Assistant in Neuropathology.

## NEUROPATHOLOGY

Second Year. — The course consists of lectures, laboratory work, and demonstrations, with tests, review exercises, and quizzes as required. A brief review is given of the anatomy required for grasping the pathological physiology of the nervous system. The lectures introduce conceptions of value for the third-year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. The laboratory work is mainly histopathological, dealing with the inflammatory reactions, the classical degenerations, and (in brief) with important entities such as general paresis of the insane and tabes dorsalis. To illustrate the simpler physiological applications of the work, special demonstrations are given to the students in groups at certain State institutions.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 72.

#### SECOND YEAR

HOURS

Lectures. Professor Southard and assistants. Afternoons in December.

Laboratory work. Professor Southard and assistants. Two hours daily, afternoons in December. 24

Written and practical tests. Professor Southard and assistants. Afternoons in December. 9

Demonstrations at State institutions, voluntary. Special.

#### NEUROLOGY

Second Year. — Clinical lectures are given at the Massachusetts General Hospital to the entire class, once a week throughout the second half of the year. The object of the course is to give the student a first-hand knowledge of the principles of diagnosis and treatment of diseases of the nervous system. The general plan of instruction is (a) Review of the anatomy of the nervous system essential to diagnosis of organic diseases; lectures and demonstrations. (b) Pathological anatomy in its relation to diagnosis; demonstrations of specimens and photographs. (c) Study of cases as they present themselves at the Out-Patient Department of the Hospital and in the wards.

Third Year.—At different times throughout the third year, clinical lectures on Neurology are given at the Massachusetts General Hospital. The class has also an opportunity to partake in the practical work in Neurology in whole sections. Short examinations and conferences are held at intervals during the year. Dr. James J. Putnam will give a series of lectures in the spring term on the Principles and Practice of Psycho-Analysis.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 81.

# SECOND YEAR

HOURS

Clinical lectures. Assistant Professor Taylor. (M. G. H.) Once a week, second half-year.

#### THIRD YEAR

Clinical lectures. Assistant Professor Taylor. (M. G. H.) Once a week,
November 23 to December 31 and during May. 8
Section teaching. Each student attends six exercises in Neurology. 18

#### PSYCHIATRY

## THIRD YEAR

During January, February, March, and April a clinical lecture will be given once a week at the Psychopathic Hospital. The different forms of mental disease will be discussed and patients exhibiting the symptoms under consideration will be presented.

During the second half-year a series of eight lectures will be given at the Harvard Medical School. This course is designed to present to the students the modern points of view in regard to insanity and the psychoneuroses and the mental diseases of adolescence.

Supplementary instruction is given to the class in small sections in the wards and Out-Patient Department of the Psychopathic Hospital. Each student will examine and report on at least one case of insanity or mental defect.

#### THIRD YEAR

HOURS

Lectures. Assistant Professor Adler. (H. M. S.) Every other week, second half-year. 8
Clinical lectures. Assistant Professor Adler. (P. H.) Once a week.

Clinical lectures. Assistant Professor Adler. (P. H.) Once a week,

January, February, March, and April. 16
Section teaching. Each student attends six exercises in Psychiatry. 18

# Ophthalmology

------, Williams Professor of Ophthalmology.

ALEXANDER QUACKENBOSS, M.D., Instructor in Ophthalmology.

HENRY H. HASKELL, M.D., Instructor in Ophthalmology.

FRED M. SPALDING, M.D., Instructor in Ophthalmology.

GEORGE S. DERBY, M.D., Instructor in Ophthalmology.

WILLIAM N. SOUTER, M.D., Fellow in Ophthalmology.

Third Year. — Instruction consists of lectures at the Medical School and of clinical exercises devoted to diagnostic methods, diagnosis, and treatment at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 82.

# THIRD YEAR

HOURS

Lectures. (H.M.S.) Every other week, first half-year. 8
Clinical exercises. Drs. Quackenboss, Haskell, Derby, and Spalding.
(E. and E.I.) In sections, first half-year. Twelve exercises for each student. 36

# Otology

-----, Walter Augustus Lecompte Professor of Otology.

EUGENE A. CROCKETT, M.D., Assistant Professor of Otology.

PHILIP HAMMOND, M.D., Associate in Otology.

WILLIAM F. KNOWLES, M.D., Assistant in Otology.

DAVID H. WALKER, M.D., Assistant in Otology.

CALVIN B. FAUNCE, Jr., M.D., Instructor in Otology.

Francis P. Emerson, M.D., Assistant in Otology.

GEORGE H. POWERS, M.D., Assistant in Otology.

GEORGE L. TOBEY, M.D., Assistant in Otology.

HENRY P. CAHILL, M.D., Research Fellow in Otology.

Third Year.—Lectures are given at the Medical School, and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year. — For a description of the fourth-year course offered in this department, see page 83.

#### THIRD YEAR

HOURS

Lectures. Assistant Professor Crockett. (H.M.S.) Every other week, first half-year.

Clinical exercises in sections. (E. and E.I.) Every student attends twelve exercises, second half-year.

# Laryngology and Rhinology

ALGERNON COOLIDGE, Jr., M.D., Professor of Laryngology.
HARRIS P. MOSHER, M.D., Assistant Professor of Laryngology.
J. Payson Clark, M.D., Instructor in Laryngology.
Rockwell A. Coffin, M.D., Instructor in Laryngology
Joseph L. Goodale, M.D., Instructor in Laryngology.
HARRY A. BARNES, M.D., Instructor in Laryngology.
George H. Wright, D.M.D., Assistant in Laryngology.
John H. Blodgett, M.D., Assistant in Laryngology.
D. Crosby Greene, M.D., Fellow in Laryngology.

Third Year. — Instruction consists of lectures and demonstrations, and of training in the use of instruments. The entire class has eight lectures during the first half-year. For the practical work at the Massachusetts General Hospital and the Boston City Hospital, the class is divided into small sections.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 83.

## THIRD YEAR

HOURS

Lectures. Professor Coolidge, assisted by Drs. Goodale, Mosher, and Wright. (H.M.S.) Every other week, first half-year. 8
Clinical exercises. Professor Coolidge, Assistant Professor Mosher, and Drs. Clark, Barnes, Greene (M.G.H.), Coffin, and Blodgett (B.C.H.). In sections, second half-year. Eighteen hours for each student.

#### FOURTH-YEAR ELECTIVES

The fourth year is devoted to elective courses, with the limitation that each student is required to take not less than three months in courses in which he serves as medical or surgical clinical clerk in hospital wards (Medicine 1, 2, and 3; Surgery 1, 2, and 3), except in the case of such students who, having attained a high standing in their Medical School work, desire to devote their entire fourth year to one subject of study. To such students, on the recommendation of a Department head, permission to devote the entire fourth year to one subject of study may be granted by vote of the Administrative Board. All students are advised to elect the course of correlative exercises offered in April and May.

The electives of the fourth year are given as half-courses, quarter-courses, and full courses. A half-course occupies the entire day for one month (the all-day plan) or the forenoons or the afternoons for two months (the half-day plan). Each half-course has a value of 125 hours. Quarter-courses occupy half the day for one month. Two quarter-courses equal a half-course. Eight half-courses are necessary to satisfy the requirement of one thousand hours of work demanded in the fourth year.

The final choice of electives must be left at the Dean's office on or before June 1. No changes in electives will be allowed after the final assignments are made, except that when a student's research work in an elective is necessarily prolonged beyond the time elected for that subject, he will be allowed, with the permission of the Administrative Board, to make such changes in his electives as will enable him to finish his research work, provided the time required does not extend beyond the school year.

The Faculty reserves the right to modify the selection of the courses chosen by any student. The *order* in which a student's electives are arranged must be determined by the Secretary of the Faculty.

The nature of the examinations shall be determined by each department subject to the approval of the Faculty. The student's credit may be based on his daily written record of work, and on a practical or written examination at the end of his course, or upon all combined. The mark assigned must be sent immediately to the Dean's office.

No student may select a fourth-year elective, covering a subject still owing in the work of the first three years, without the consent of the head of the Department in writing.

# FINAL COURSE OF CORRELATIVE EXERCISES

(Whole Course)

In the last two months will be offered a general course of correlated lectures, demonstrations, and exercises, given in large part by the senior teachers in the School, which shall have for their object the summing up of the various subjects, the presentation of principles, and the relation of the various branches to each other. These exercises will be given to the whole class and will be both clinical and didactic.

This course will occupy both mornings and afternoons, with intervening periods to be devoted to individual study, and will be given at the different hospitals and at the Medical School. The following subjects, among others, will be considered from the combined view-points of different departments: Gastro-intestinal diseases; Syphilis; Renal disease; Infections, etc. A detailed announcement and schedule of exercises will be issued prior to the commencement of the course.

# FOURTH-YEAR ELECTIVES ARRANGED UNDER DEPARTMENTS

ANATOMY.

[Under this Heading are included the Courses in Anatomy, Comparative Anatomy, Embryology, and Histology.]

Anatomy 1. Assistant Professor Cheever. Half-courses, afternoons, October and November, February and March.

This is a course in general, applied and surgical anatomy designed to emphasize and explain such parts of general anatomy as are of practical importance. Less important details are studied briefly or omitted altogether, according to their deserts, but ample opportunity is given to the student who desires it to review the chief facts of general anatomy or to pay especial attention to regions in which he is interested.

Instruction is by demonstrations, dissection, the study of frozen sections, and specimens and informal quizzes. The greatest importance is attached to the verification by the student in his own dissection of the facts presented by the instructor.

To enable the course to be satisfactorily adjusted to courses in other departments, a limited number of students may be permitted, on consultation with the instructor, to take one month with the first section and the other month with the second section.

Note. — No one can take this course who has not passed his first and second-year anatomy.

Anatomy 2. Anatomy of Higher Vertebrates. Whole course, first halfyear, at hours to be arranged with the instructors.

The object of this course is to give the student an exact knowledge of the anatomy of a few mammals and birds as a foundation for research in Anatomy and Embryology, or for experimental work in Physiology or Pathology.

A small number of mammals, including a carnivore, rodent, and ungulate, and one or two birds will be studied. Each student will be required to make thorough dissections of each animal and to prepare sections of the most important organs. There will be lectures upon the general principles of comparative anatomy.

College courses in the morphology of animals, especially of vertebrates, are a desirable preparation for this work.

Anatomy 3. Advanced Vertebrate Embryology. Assistant Professor Lewis. Whole course, half-days for four months, or all day for two months, second half-year.

An elementary knowledge of embryology, such as may be obtained from Course 1, is required. Course 5, offered by the Department of Zoölogy of Harvard College, or an equivalent course, is recommended.

In this course sixteen hours per week (at times chosen by the student) are to be spent in laboratory work. There are no lectures, but at appointed times the students meet for directions and for a thorough discussion of the specimens studied. The methods of making graphic and wax reconstructions will be taught, together with the ways of preparing drawings for publication. Reconstructions by both methods, and a certain number of drawings suitable for reproduction, will be required.

The Manual of Human Embryology, edited by Keibel and Mall, will be used as a text-book and original publications will be consulted. At the discretion of the instructor students may have access to the extensive embryological collection and to the collection of models, many of which were made in this laboratory.

Anatomy 4. Advanced Histology. Assistant Professor Bremer. Whole course, second half-year, at hours to be arranged with the instructor.

This course is intended to supplement the course in the Anatomy of Higher Vertebrates. The genesis as well as the adult histology of the various parts and organs is studied, and special stress is laid on their differences, developmental and structural, in the animals chiefly used in experimental medicine and animal economics. Students will also be required to master the principal technical methods used in Histology.

- Anatomy 5. Half-course, afternoons, October and November. Structure and development of the eye, ear, and nasopharynx.
- Anatomy 6. Half-course, afternoons, October and November. Structure and development of the urogenital system.
- Anatomy 7. Half-course, afternoons, October and November. Development and histology of the nervous system.

### PHYSIOLOGY.

Physiology 1. Half-courses, forenoons, afternoons, or all day, first halfyear; afternoons, second half-year.

Detailed study in special subjects in physiology. Such study will include preparation of bibliographies, reading of classical papers, repetition of important experiments, and reports on work accomplished.

Physiology 2. Investigation. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students properly qualified, who are willing to spend sufficient time in research, will be welcomed into the laboratory and given problems to work upon. During the conduct of their investigations they will receive the counsel and guidance of other investigators working with them.

Following are some suggestions for research which may readily be conducted in the Laboratory:—

Quantitative studies of human sensory and motor thresholds under various conditions, including the effects of stimulants and narcotics; the effects of toxins and poisons on the nervous system in experimental animals; the excitability of the "centers" of the medulla under various conditions. Studies in the physiology of the central nervous system. Studies of problems in the movements of the stomach and intestines, and in the activities of glands of internal secretions.

### Comparative Physiology.

Comparative Physiology 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students may elect work in any field of physiology. It is to be presumed that such students desire additional work in physiology to fit them for some special field of medicine, for example, the diseases of the nervous system; or they may wish to pursue physiology, pathology, or some other biological science as a profession. They will be received into the research laboratories of the department, and will carry on their studies with the personal assistance of Professor Porter. The work will consist of fundamental experiments, the study of accessory data, and the reading of selected original investigations. The course is open to qualified persons not students in the Medical School.

Comparative Physiology 2. Physiology of the eye, ear, and upper respiratory tract. Afternoons, except Saturday, in December and January.

### BIOCHEMISTRY.

Biochemistry 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

### BACTERIOLOGY.

Bacteriology 1. Half-courses, forenoons, afternoons, or all day, February and March.

These electives will be of five kinds, including (a) instruction in methods of diagnosis, depending upon bacteriological procedures; (b) instruction in methods of bacteriological diagnosis in use in health board laboratories, including the examination of waters and soils; (c) instruction in methods of opsonic-index work, with practical application; (d) special studies of spirochaetes and trypanosomes (open during both the first and second half-years, but should be taken for at least two months); (c) research work in any direction for which the student may be fitted.

Longer courses may include one or the other of these, together with a limited piece of research work.

Note. — Students are advised not to take all-day courses in this subject. Under special conditions, electives begun before may be continued through April and May.

### PATHOLOGY.

Pathology 1. Professor F. B. Mallory. Half-courses, all day or forenoons, throughout the year.

This course is given in the pathological laboratory of the Boston City Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Pathology 2. Assistant Professor J. H. Wright. Half-courses, all day, December, January, February and March.

This course is given in the pathological laboratory of the Massachusetts General Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Each course limited to four men, and will not be given as quartercourses for two months.

Pathology 3. Half-courses, mornings or afternoons, second half-year.

This course is given in the laboratory of pathology, H.M.S., and is open to men acceptable to the head of the department who wish to take up research work in pathological anatomy or in experimental pathology. The problems will be arranged by consultation between students and the head of the department. Not more than two men will be received in any one course.

Pathology 4. Professor W. T. Councilman and Instructor.

This course will consist in the general work of the Pathological Laboratory of the Peter Bent Brigham Hospital, emphasis being placed upon the inter-relation of clinical and pathological work. Two students of the fourth-year class will be taken into the laboratory from October first to February first, these devoting all their time to the work. From February first two students will be received for periods of not less than two months.

### COMPARATIVE PATHOLOGY.

Comparative Pathology 1. Half-course, afternoons, October and November, first half-year. Laboratory work, lectures and conferences. Attendance is limited to ten students.

The laboratory work will consist in a study of such infectious diseases of man and the higher animals as are reproducible at will upon the smaller animals. Each disease taken up will be studied as far as possible in the living animal with reference to the cellular reactions and the antibodies of the blood, and the secretions and excretions. The tissue changes will be studied histologically, and the chief biological and pathogenic characters of the microörganisms investigated. At the same time attention will be given to changes in the character of the diseases due to different degrees of artificially induced immunity.

Comparative Pathology 2. Research. Students who have taken Course 1 or its equivalent will be admitted as research students to work upon some problem in experimental and comparative pathology for which adequate facilities can be provided. Such work may be undertaken at the convenience of the student.

### NEUROPATHOLOGY.

Neuropathology 1. Half-courses, forenoons, afternoons, or all day, throughout the year, preferably the second half-year.

The case-method is followed. The report of a selected case will be worked up by the student (as if for publication), based upon the personal employment of approved neuropathological methods.

Limited to two during a given month. Consultation with the instructor in advance will secure the choice of a case in line with the student's later special work.

Neuropathology 2. Half-courses, forenoons, afternoons, or all day, throughout the year.

Clinico-pathological methods in neurology and psychiatry and allied problems of internal medicine and surgery. Students taking this course for several months may, with the consent of the authorities, serve as clinical clerks or laboratory externes in the Psychopathic Hospital or, under special conditions, in other State institutions. Students will be permitted to attend staff conferences at the institutions where their work is carried on. They may be required to submit reports or theses concerning observations made.

The clerkships and externeships are limited to two in a given month. The instructor should be consulted in advance. SEMINARY IN DISEASES OF THE NERVOUS SYSTEM.

A voluntary conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry and for graduate students taking allied courses has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by students.

PREVENTIVE MEDICINE AND HYGIENE.

Preventive Medicine and Hygiene 1. Half-course, afternoons, February, and March.

This course will consist of laboratory work, sanitary excursions, or special research. The laboratory instruction will comprise analysis of air, soil, water, milk, and disinfectants.

Each course is limited to ten men. Students must see the instructor in charge before enrolling in this course. Longer courses in research by arrangement.

PHARMACOLOGY.

Pharmacology 1. Quarter-courses, forenoons, January and second halfyear.

The work in this course will consist in the repetition of important experiments, the reading of selected original papers, and the preparation of reports; opportunity will be given for both experimental and chemical work.

MEDICINE.

Medicine 1. Full courses, all day, throughout the year.

This work will be given at the Massachusetts General Hospital. Each half-course will be limited to fourteen students. Students will serve as clinical clerks in the wards of the hospital and will have opportunity to systematically study the patients. Work in the wards will be supplemented by work in the Out-patient Department. Ample facilities will be furnished for the laboratory investigation of the patients. This course will be given under the supervision of Professor Edsall and Assistant Professor Cabot. The courses will be given for two months each continuously, beginning October 1st, December 1st, February 1st, and April 1st. Each student electing the course must take it for at least two consecutive months unless he has already had a course in Medicine 2 or 3, in which case he may take one or more further months in this course.

Medicine 2. Full courses, all day, throughout the year, except April and May.

This work will be given at the Peter Bent Brigham Hospital. Each half-course will be limited to ten students. Students will serve as clinical clerks in the wards of the Hospital and will have opportunity to study systematically the patients. Work in the wards will be supplemented by work in the Out-patient Department. Ample facilities will be furnished for laboratory investigation of patients. This course will be given under the supervision of Professor Christian and Dr. Frothingham. The courses will be given for two months each, beginning October 1st, December 1st, and February 1st. Each student electing the course must take it for at least two consecutive months unless he has already had a course in Medicine 1 or 3, in which case he may take one or more additional months in this course.

Medicine 3. Full courses, all day, throughout the year, except April and May.

This work will be given at the Boston City Hospital. Each half-course will be limited to eight students. Students will serve as clinical clerks in the wards of the Hospital and have opportunity to study systematically the patients. Work in the wards will be supplemented by work in the Out-Patient Department. Facilities will be furnished for laboratory investigation of patients.

The courses will be given under the supervision of Professor Sears and Assistant Professor Joslin. The courses will be given for two months each, beginning October 1st, December 1st, and February 1st. Each student electing the course must take it for at least two consecutive months, unless he has already had a course in Medicine 1 or 2, in which case each student may take one or more additional months in this course.

Medicine 4. Half-courses, forenoons, in December and January, February and March.

This work will be given at the Massachusetts General Hospital. Each half-course will be limited to four students. Only students who have completed courses in Medicine 1, 2, or 3 will be eligible. The work will consist of the study of cardiac cases by means of various graphic methods, with discussion of cardiac disease in relation to information yielded by the application to individual cases of such graphic methods of study. This course will be given by Dr. J. H. Pratt.

TROPICAL MEDICINE

Tropical Medicine 1. General Course in Tropical Medicine. Quartercourse, mornings, February. Provided arrangements for clinical work in tropical diseases are completed by that time, this course will consist of lectures, laboratory work, and bedside demonstrations upon as many of the important tropical diseases as it is possible to consider in the time allotted to the course.

A course in Helminthology may be obtained by special arrangement.

Tropical Medicine 2. Tropical Entomology. Quarter-course, afternoons, February.

This course will include general lectures on the structure and classification of the Arthropoda, followed by a more detailed account of the Arthropoda known to be concerned and likely to be concerned in the transmission of human and animal diseases or in the inflictions of local injuries and physiological disturbances.

Laboratory work and demonstrations will also constitute an important feature and will provide, as far as is possible during the time allotted, for training in the dissection of insects, in the principal methods of studying their life histories and habits, and in their identification by means of dichotomic tables and from technical descriptions.

Tropical Medicine 3. Tropical Protozoölogy. Quarter-course, mornings, November.

The course in Protozoölogy will include a general discussion of the morphology and life history of the more important human protozoan parasites, such as the amoebae, flagellata (trypanosomes, the parasites of kala azar and oriental sore), sporozoa (malarial parasites) and ciliata. Their relations to their definitive and to intermediate hosts will also be discussed, together with phenomena of immunity. Methods for the cultivation of certain parasites and suitable procedures for collecting, staining, and mounting will be discussed as far as possible in the time allotted.

This course will not be given to less than six students.

Tropical Medicine 4. Tropical Pathology. Quarter-course, afternoons, November.

This course will include the study of the macroscopic and histological lesions of as many of the important tropical diseases as it is practicable to consider in the time allotted to the subject.

This course will not be given to less than six students.

Tropical Medicine 5. Tropical Bacteriology. Quarter-course, afternoons, January.

This course will include the identification of the etiological factor and the diagnosis of the infection by laboratory methods, such as cultures, serum reactions, and the inoculation of animals in as many of the important tropical diseases as the time allotted to the subject will allow for.

This course will not be given to less than six students.

Tropical Medicine 6. Clinical Laboratory Work in Tropical Diseases.

Quarter-course, afternoons, April.

This course will be practical and will cover methods of obtaining and the technic of examination of materials from the more important tropical infections where a diagnosis may be made or aided by the microscope.

This course will not be given to less than six students.

### ROENTGENOLOGY

Roentgenology I. Half-courses, mornings, throughout the year, except April and May.

A complete course will be given in the application of the Roentgen Ray in diagnosis and therapeutics. Mornings from 8.30 to 12 at the Massachusetts General Hospital and Peter Bent Brigham Hospital, Drs. Walter J. Dodd and Alfred Luger.

### PEDIATRICS.

Pediatrics 1. Half-courses, all day, throughout the year.

The work will consist of instruction in the wards and out-patient departments of the Children's Hospital, of the Infants' Hospital, of the Children's Department of the Massachusetts General Hospital, in the contagious wards of the South Department of the Boston City Hospital, at the Children's Tubercular clinic of the Burroughs Place Dispensary, at the Massachusetts Babies' Hospital, and in the Children's wards and out-patient department of the Boston Dispensary. The students will be assigned to the various clinics by the Professor of Pediatrics, and the work will be under his supervision. The mornings will be taken up with teaching in the various wards and out-patient departments. Two lectures on the significance of the ear in early life will be given in the wards of the Infants' Hospital. Especial instruction will be given at the Massachusetts Babies' Hospital in the examination and preparation of milk modifications in connection with substitute feeding, and here instruction will also be given in connection with the subject of wet nurses.

One afternoon in each week will be spent at the South Department. Here instruction in general Pediatrics as connected with contagious diseases will be demonstrated, and whenever possible the technic of intubation will be shown.

One afternoon in each week will be devoted to lectures on Preventive Pediatrics at the Infants' Hospital.

Each student will have cases assigned to him on two afternoons of each week, when in the early part of the afternoon instruction in physical examination will be given by the various instructors, and in the latter part of the afternoon these cases will be discussed with one of the senior members of the department. Instruction will also be given in the laboratory of the Children's Hospital in clinical work connected with lumbar puncture and with the examination of the spinal fluid, blood, and urine.

Practical instruction will be given by means of Roentgen plates in the normal development of early life and in the more important diseased con-The class will be taken to a model farm, where everything practical pertaining to the milk supply for infants and young children will be taught. Practical instruction will also be given in a research milk laboratory in the writing of prescriptions and in the routine of laboratory work.

The examination will be an oral one, held by the Professor of Pediatrics.

### SURGERY.

The electives offered by the Department of Surgery consist of halfcourses (occupying the whole day for one month) and quarter-courses (either mornings or afternoons for one month). They are so arranged that

1	2	3	4	5	6
All day. I month. P.B.B.H. Dresser. Practical Surgery. Oct. to May.	All day 1 month. B.C.H. (a) Clinical and Labora- tory. Dr. Nichols (b) Dresser Service. B.C.H. (c) Dresser Service. Rellef Station. Oct. to May.	All day. 1 month. M.G.H. Dresser. Practical Surgery. Oct. to May.	Afternoons.  1 month. Children's Hospital. General Surgical Service. Dresser. Oct. to March.	Forenoons.  1 month. B.C.H. G. U. Surgery. Thorndike. Oct. to March.	Forenoons. 1 month. M.G.H. G. U. Surgery. H. Cabot. Oct. to March.
Half- course.	Half- course.	Half- course.	Quarter- course.	Quarter- course.	Quarter- course.

they may be themselves combined in different groups or taken in combination with quarter-courses offered by other departments. No student will be permitted to take more than four half-courses in surgery without special permission of the head of the department.

Surgery 1. Clinical Clerk Service at the Brigham Hospital. Half-courses, all day, for one month, throughout the year. Peter Bent Brigham Hospital. Dr. Harvey Cushing.

Students will serve as assistants to the hospital staff in the routine ward, operating room, and laboratory work of the hospital. The course is limited to six students.

Surgery 2. Clinical Work at the Boston City Hospital.

- (a) Clinical and laboratory work, half-courses, all day, except Saturday and Sunday, for one month—October to April. Associate Professor E. H. Nichols and Dr. H. B. Loder. Boston City Hospital and Laboratory of Surgical Pathology. Includes work at the Boston City Hospital mornings, and laboratory work at the Harvard Medical School afternoons. (b) Dresser's Service at the Boston City Hospital, half-courses, under the direction of Assistant Professor J. B. Blake, all day, for a month, throughout the year, under hospital administration. (c) Dresser's Service at the Haymarket Square Relief Station, half-courses, all day, for one month, throughout the year, under the direction of Assistant Professor J. B. Blake, under hospital administration.
- Surgery 3. Clinical Clerk Service at the Massachusetts General Hospital. Half-courses, all day, for one month, throughout the year. Massachusetts General Hospital. Associate Professor C. A. Porter and Dr. C. L. Scudder.

Students will serve as assistants to the hospital staff in the routine ward, operating room, and laboratory work of the hospital. The course is limited to four students.

Surgery 4. Clinical Clerk Service at the Children's Hospital. Quartercourse, afternoons, for one month, October to March, inclusive. Children's Hospital. General Surgery. Dr. James S. Stone.\*

Students will serve as assistants to the hospital staff in the routine ward, operating room, and laboratory work of the hospital. The course is limited to four students.

<sup>\*</sup> This course can be taken in conjunction with *Orthopedic Surgery 2*, mornings for one month, to make a full half-course of practical dresser service at the Children's Hospital. In this way the student's whole day for a month will be spent at the Children's Hospital.

Surgery 5. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, October to March, inclusive. Boston City Hospital. Dr. Paul Thorndike.

Instruction will consist of ward work, taking of histories, the witnessing of and assisting at operations, the reporting of the progress of cases and seeing the end results. Conferences with the students will be held from time to time.

Surgery 6. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, October to March, inclusive. Dr. Hugh Cabot. Massachusetts General Hospital.

The student will be assigned as assistant in the clinic and will take part in the routine work, case-taking, examination of patients, diagnosis and treatment. Operations and the after-care of major operative cases will be followed in the wards. Instruction will be given in cystoscopy and in laboratory methods of diagnosis.

ORTHOPEDIC SURGERY.

Orthopedic Surgery 1. Quarter-courses, afternoons, October, December, February, and April.

The fourth-year elective course is planned to continue the third-year required course, and is comprehensive in character. The exercises are clinical, and are given in the orthopedic clinics and wards of the Children's Hospital and of the Massachusetts General Hospital. The instruction is given daily each afternoon in the week, and is so arranged that opportunities are given for the examination of cases, with systematic note taking, combined with instruction successively in symptoms, diagnosis, the principles and details of treatment, with instruction in the common operations of orthopedic surgery as opportunity offers.

Each course is limited to eight men.

Orthopedic Surgery 2. Quarter-courses, mornings, from October to April inclusive.

This course is offered in the wards of the Children's Hospital, and in the course the student will serve as dresser and assistant, having an opportunity to make the regular visits, to examine and follow the course of operative and non-operative cases, to receive instruction in diagnosis and treatment, to be present at operations, and to receive instruction in the use of plaster of paris and apparatus. The course will occupy the entire morning. This course may be taken in connection with the course on the surgery of children (Surgery 4), the two together counting as a half-

course. In this way the student's whole day for a month will be spent at the Children's Hospital.

Each course is limited to two men.

OBSTETRICS AND GYNAECOLOGY.

Obstetrics and Gynaecology 1. Obstetrics. Half-courses, all day, throughout the year.

The course will be given at the Boston Lying-in Hospital and at the Medical School. During the first half of the course the student will lodge at the Hospital, and devote his time chiefly to attendance on cases in the out-patient clinic; he will also be called upon to assist at operations, and, when his other duties permit, to make ward visits with the physician on duty. In the second half of the course he will conduct the convalescence of the cases delivered by him during his resident service, write full reports of his cases, and make daily ward visits, receiving clinical instruction on house patients, and witnessing operations. In his clinical work he will have the supervision and instruction of the Department and of the Hospital Staff on duty. He will also be given, at the Medical School, a course of demonstrations in operative obstetrics, and each student will practice the various operations on the manikin.

Obstetrics and Gynaecology 2. Gynaecology. Half-courses, forenoons, throughout the year.

The courses will be given by Professor Green (Oct. to Jan.) and Assistant Professor Newell (Feb. to May), assisted by Drs. Young, Mason, and R. M. Green, in the wards and out-patient department of the Gynaecological Service at the Boston City Hospital, and by Professor Graves, assisted by Dr. Hutchins, at the Free Hospital for Women, Brookline. These clinics afford ample material for a comprehensive study of gynaecology, from the simpler lesions requiring only minor local treatment or the various plastic operations, to the major cases treated by capital operation. Students will be given opportunity to educate the touch, and will be instructed in diagnosis and in the methods of minor treatment. The various operations, major and minor, will be demonstrated, and opportunity given to study convalescence and post-operative treatment. Students will also be required to study and report on pathological specimens removed by operation, under the supervision of Professor Mallory or Professor Graves.

Cases will be assigned for history-taking, examination, diagnosis, with notes on operation and subsequent treatment. As far as possible students will be expected to assist in clinical work.

DERMATOLOGY AND SYPHILIS.

Dermatology 1. Quarter-courses, forenoons, November, January and March.

Instruction in clinical dermatology will be given at the Massachusetts General Hospital, both in the out-patient department and in the ward for skin diseases. Instruction will also be given in the histology and pathology of the skin. Students electing Course 1 or 2 are strongly recommended to elect Course 3.

Dermatology 2. Quarter-courses, forenoons, November, January, and March.

The work in this course will be the same as in Course 1, with the exception that it extends over one month instead of two.

Dermatology 3. Quarter-course, afternoons, in January or in February, but not in both months.

This course consists of microscopical work and is given on five afternoons a week at the Harvard Medical School. Students electing this course will be trained in the histological study of the commoner diseases of the skin.

Syphilis. Quarter-courses, forenoons, October and November.

Instruction in clinical syphilis will be given daily at the Massachusetts General Hospital.

NEUROLOGY.

Neurology 1. Half-courses, forenoons, except April and May.

The design of these courses is to continue the work of the third year in its practical relations. The aim will be to give the student an opportunity for the independent study of cases. To this end the following methods of instruction in general will be adopted:—

- (1) Daily informal conferences on neurological topics.
- (2) History-taking, and personal examinations of patients at the outpatient department of the Massachusetts General Hospital.
- (3) Assistance in the clinic, both in the general examination of patients and in treatment, especially by means of electricity.
- (4) The detailed preparation of reports bearing on the subjects studied, and such original investigation as the time permits. A study of the literature bearing on special topics apart from text-books is urgently advised.

In the final marking much account will be taken of the daily practical work of the student.

Neurology 2. Quarter-courses, forenoons, except April and May.

Instruction in these courses will be similar to that of *Neurology 1*, except that it will continue for one month instead of two. The instruction will be given at the Massachusetts General Hospital.

### SEMINARY IN DISEASES OF THE NERVOUS SYSTEM.

A voluntary conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry and for graduate students taking allied courses has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by the students.

Psychiatry 1. Half-courses, forenoons, or all day, throughout the year.

A clinical course in which, by permission of the authorities, the wards and laboratories of the Psychopathic Hospital may be used and the daily staff conferences attended. In addition to a complete representation of mental diseases, there is much material of a neurological and general medical interest, so that students are advised to take the work later rather than earlier in the year. Under certain circumstances students taking the course for several months may be appointed to interneships by the hospital authorities.

### SEMINARY IN DISEASES OF THE NERVOUS SYSTEM

A voluntary weekly conference for all fourth-year students taking electives in neuropathology, neurology, or psychiatry, and for graduate students taking allied courses has been arranged by the heads of the departments mentioned. The exercises will be partly in the nature of reviews from recent literature, partly clinical or pathological demonstrations, and partly the presentation of theses and reports by students.

### OPHTHALMOLOGY.

Ophthalmology 1. Half-courses, forenoons, second half-year.

The work will consist of personal instruction in the use of the ophthalmoscope and other instruments of precision. An opportunity will be given to work in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary and to observe and study cases in the wards. In addition there will be instruction in ophthalmic operations, with opportunity to witness their exemplification in the operative work of the hospital.

Ophthalmology 2. Quarter-course, forenoons, in February.

This course will be devoted to instruction in the use of the ophthalmoscope.

OTOLOGY.

Otology 1. Half-courses, forenoons, throughout the year.

For men who elect but one half-course, the work will consist chiefly of clinical training and instruction, hearing tests, and objective examinations and manipulations in the out-patient, house, and operating services of the Massachusetts Charitable Eye and Ear Infirmary.

For men especially interested in Otology, who wish to devote all their time to the subject, a thorough course of instruction has been planned embracing the anatomy, physiology, and pathology of the ear, in addition to clinical instruction. Each course limited to three men.

Otology 2. Otoscopy and Diagnosis. Dr. Philip Hammond and assistant. Quarter-courses, forenoons, February and March.

This course will be given at the Massachusetts Charitable Eye and Ear Infirmary. The student will be instructed in the objective examination of the ear, in making hearing tests and in the determination of disturbances of equilibration. He will be given an opportunity to make diagnoses in a great variety of cases. Each course limited to three men.

Otology 3. Histology and Pathology of the Ear. Dr. H. P. Cahill. Quarter-course, mornings in January.

This course will be given at the Medical School. Instruction will consist of directed reading, illustrated by specimens, and in laboratory work under the personal supervision of the instructor.

Each course limited to three men.

LARYNGOLOGY.

Laryngology 1. Quarter-courses, forenoons, October, November, December, and January. Massachusetts General Hospital.

These courses are chiefly clinical in character; but in addition to the routine work of the clinic, instruction will be given in diagnosis, treatment, and applied anatomy and pathology, as well as an opportunity to assist at operations. Each student is required to follow and report on some special selected subject.

Each course limited to four and preference will be given to men taking the course for two months.

Laryngology 2. Drs. R. A. Coffin and J. H. Blodgett. Quarter-courses, forenoons, February, March, and April. Boston City Hospital.

These courses are clinical and include both ward and out-patient service in the Department for Diseases of the Nose, Throat, and Ear.

Each course limited to two and preference will be given to men taking the course for two months.

# TABULAR VIEW OF UNDERGRADUATE COURSES

### FIRST YEAR - First Half-Year

Monday.  Monday.  October and November.  Anatomy. Lecture or Demonstrations.  December and January.  Histology and Embryology. Lecture.  Anatomy. Dissection.  December and January.  Histology and Embryology. Lecture.  Mistology and Embryology. Lecture.  December and January.  Histology and Embryology. Lecture.  October and January.  Anatomy. Lecture or Demonstrations.  Anatomy. Lecture or Demonstrations.  Histology and Embryology. Lecture.	FRIDAY.	SATORDAY.  October to January.  Examinations or Laboratory.
December and January.  Anatomy. Dissection.		

### FIRST YEAR. - Second Half-Year

Physiology. February

			8	Rima		
	Monday.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10			Lecture or Demonstration.	nstration.		
10-1			Laboratory Experiments.	riments.		
			March, April, May.	ay.		
9-10			Lecture or Demonstration.	stration.		
10-12.15			Laboratory Experiments.	riments.		
12.15		Thesis	Thesis or Lecture or Laboratory Experiments.	nory Experiments.		
			BIOLOGICAL CHEMISTRY.	STRY.		
2-3		Lecture. D	Lecture. Daily except Saturday.	7.		
3-5.30	Lab	Laboratory.	Laboratory and Conference.	Laboratory.	ory.	
						The second secon

SECOND YEAR. - First Half-Year.

	OCTOBER.	November.	DECE	<b>D</b> есемвев.		JANUARY.
9-12	Pathology.	Pathology. Laboratory.	1 week. Pathology. Laboratory. Daily.	2 and 3 weeks. Pathology of certain Parasitic Diseases. Laboratory.	9-10	Monday, Wednesday, and Friday. Surgery. Clinical Lecture. Nichols. B. C. H.
				E. E. Tyzzer. Daily.	9-12	9-12 Tuesday, Thursday, and Saturday.
					10.30-12	10.30-12 Monday, Wednesday, and Friday. Pathology. Laboratory.
12-1	Patho	Pathology. Lectures. Daily.	<b>y</b> •		12-1	Pathology, Lectures, Daily.
2-3	Bacteriology Daily excep	Bacteriology. Lectures. Daily except Saturday.	Neurops Daily exect	Neuropathology.		Surgical Pathology.
3-5.30	Bacteriology. Dally exce	Bacteriology. Laboratory. Daily except Saturday.	Lectures and	Lectures and Laboratory. Southard.		Surgery. Cushing and assistants.

SECOND YEAR. - Second Half-Year.

SATURDAY.	Medicine B. C. H. Sears					
FRIDAY.	Surgery M. G. H.		Clinical Pathology Hewes Bldg. D		Medicine Christian Bldg. A, Room 201	Pharmacology May only Hunt Bldg. E
THURSDAY.	Dermatology M. G. H.		Pharmacology Feb., March, April Hunt Bldg. E	Hygiene Rosenau Bldg. E	Obstetrics Green Bldg. A, Room 201	Surgery. Bldg. A, Room 201
WEDNESDAY.	Surgery B. C. H.	Section Work Anatomy, Medicine, Surgery See Section Schedules	Clinical Pathology Hewes Bldg. D		Pharmacology * Hunt Bldg. E	Hygiene * Rosenau Bldg. E
TUESDAY.	Neurology M. G. H. Taylor	Sec Anatomy, See Sec	Pharmacology Hunt Bldg. E	Hygiene Rosenau Bldg. E	Medicine Christian Bldg. A, Room 201	Surgery Bldg. A Room 201
Monday.	Medicine M. G. H. Edsall		Clinical Pathology Hewes Bldg. D		Pharmacology * Hunt Bldg. E	Hygiene * Rosenau Bldg. E
	9-10	10-12	1-2	2-3	3-4	4-5

\* Half the class.

THIRD YEAR. - First Half-Year.

	Monday.	TUESDAY.	Wednesday.	THURSDAY.	FRIDAY.	SATURDAY.
9-12			Section Work. See Section Schedules	Work. Schedules		
12-1 or 12.30-	Medicine P. B. B. H. Christian	Surgery M. G. H. and B. C. H.	Surgery P. B. B. H.	Medicine M. G. H., Edsall B. C. H., Sears	Pediatries Children's Hosp. Morse	Syphilis Sept. 29 to Nov. 23 M. G. H. Post. Neurology Nov. 23 to Dec. 31 M. G. H.
or 1.30 -2.30			Luncheo	Luncheon Period		
2.30- 3.30	Obstetrics Green Bldg. A, Room 201	Medicine Christian Bldg. A, Room 201	Gynaecology and Otology on alternate wecks Bldg. A, Room 207	Obstetrics Green Bldg, A, Room 201	Medicine Christian Bldg. A, Room 201	
3.30-	Surgery Bldg. A, Room 201	Ophthalmology and Laryngology on alternate weeks Bldg. A, Room 207	Pediatrics Bldg. A, Room 201	Surgery Bldg. A, Room 201	Clinico-pathological Demonstration Bldg, D	
4.30-						-

## THIRD YEAR. - Second Half-Year.

SATURDAY.		Neurology and Psychiatry Feb., Man., Apr., Psychopathic May M. G. H.		~		
FRIDAY.		Pediatrics Children's Hosp. Morse		Surgery Bldg, D	Clinico-Pathological Demonstration Bldg, D	
THURSDAY.	Section Work. See Section Schedules	Medicine B. C. H., Sears and M. G. H., Edsall	n Period	Medicine Cabot Bldg. A, Room 207	Dermatology and Psychiatry alternate weeks Bldg. A, Room 207	
Wednesday.	Section See Section	Surgery P. B. B. II.	Luncheon Period	Obstetrics FebMar. Medicine Sears April-May Bldg. A, Room 201	Orthopedic Surgery and Syphilis alternate weeks Bldg. A, Room 201	
TUESDAY.		Surgery M. G. H. and B. C. H.		Medicine Cabot Bldg. A, Room 207	Pediatrics Bldg. A, Room 207	
Mondax.		Medicine P. B. B. H. Christian		Obstetrics Bldg. A, Room 201	Surgery Bidg. A, Room 201	
	9–12	12-1 or 12.30- 1.30	1 or 1.30 to 2.30	2.30-	3.30-4.30	4.30-

### DEGREES

ON FEBRUARY 27, 1914, DEGREES WERE CONFERRED AS FOLLOWS:

### M.D.

George Hayward Binney, Jr., A.B. 1908.

Jacob Baldwin Bruce, Jr., s.B. 1908.

Ernest Granville Crabtree, PH.B. (Wooster Univ.) 1906.

James Harmount Long, A.B. (Ohio Wesleyan Univ.) 1904, A.M. (ibid.) 1907.

John Otis Garfield Niles, A.B. 1905.

Prodromos Nicholas Papas.

### M.D. (Out of Course)

Norman Brown Cole, A.B. 1909, as of the class of 1913.

Alson Raphael Kilgore, s.B. (Univ. of California) 1909, cum laude, as of the class of 1913.

### Dr.P.H.

Martin Russ Edwards, M.D. 1908.

Thesis, "The Bacteriological Standardization of Disinfectants, with Especial Reference to the Presence of Organic Matter."

On Commencement Day, June 18, 1914, Degrees were conferred as follows:—

### M.D.

Kenneth Field Albee, PH.B. (Brown Univ.) 1910.

Benjamin Harrison Alton, s.B. (So. Dakota State Coll.) 1908, s.M. (ibid.) 1910.

Archibald Hildreth Beard, A.B. (Univ. of Kansas) 1910.

David Lawrence Belding, A.B. (Williams Coll.) 1905, M.D. (Boston Univ. School of Medicine) 1913.

Marcellus Bronk, A.B. (Cornell Univ.) 1910.

Herbert Rutherford Brown, s.B. (Univ. of Rochester) 1901.

Ivan Roy Burket, A.B. (Univ. of Kansas) 1910, A.M. (ibid.) 1911.

Benjamin Prescott Burpee, A.B. (Dartmouth Coll.) 1909.

Austin Walter Cheever, A.B. 1910.

Joseph Powitzer Cohen, A.B. 1909.

Clay Crawford, A.B. (Yale Univ.) 1909.

Jeremiah John Donovan, A.B. (Boston Coll.) 1900.

William James Fay, A.B. (Clark Univ.) 1910.

Miguel Joaquin Fernández, A.B. (Colegio Pinillos, Colombia) 1907.

Carl Hernfrid Fornell, A.B. 1910.

Thomas Albert Foster, A.B. (Dartmouth Coll.) 1910.

Harold Inman Gosline, A.B. 1909.

Irving Van Vliet Grannis, s.B. (Univ. of Wisconsin) 1912.

Hyman Green, A.B. 1911.

John Halliday, A.B. 1899.

Harold Valmore Hyde, s.B. (Dartmouth Coll.) 1910.

Peirce Henry Leavitt, s.B. 1910.

Clarence William Lieb, A.B. (Colorado Coll.) 1908, A.M. (ibid.) 1909.

Laurence Joseph Louis, Jr., A.B. (Holy Cross Coll.) 1910.

Israel Lurier, A.B. (Clark Univ.) 1910.

Henry Britt Moor, s.B. (Colby Coll.) 1910.

Wayland Augustus Morrison, A.B. (Leland Stanford Jr. Univ.) 1910.

John Henry Morrissey, Jr., A.B. (Brown Univ.) 1910.

Way Sung New, A.B. (St. John's Coll.) 1910.

Richard Augustine Rochford, A.B. (Holy Cross Coll.) 1910.

Roger William Schofield, A.B. (Clark Univ.) 1910.

Alfred Theodore Shohl, A.B. 1910.

Marius Nygaard Smith-Petersen, s.B. (Univ. of Wisconsin) 1910.

James Leavitt Stoddard, A.B. 1910.

Carl Frithiof Vernlund, s.B. (So. Dakota State Coll.) 1909.

Paul Withington, A.B. 1909.

### M.D. cum Laude

George Warren Bachman, A.B. 1908.

Carl Alfred Lanning Binger, A.B. 1910.

Heiman Caro, A.B. 1911 (1910).

Stanley Cobb, A.B. 1910.

Stephen Aratas Cobb, Jr., A.B. (Bates Coll.) 1909.

Ward Hance Cook, A.B. (Univ. of Kansas) 1909, A.M. (ibid.) 1910.

James Johnson Durrett, s.B. (*Univ. of Alabama*) 1908, s.M. (*ibid.*) 1909, PH.G. (*ibid.*) 1910.

Cyrus Hartwell Fiske, A.B. (Univ. of Minnesota) 1910.

Horace Gray, A.B. 1909.

Alsoberry Kaumu Hanchett, A.B. 1911 (1910).

Frederick Thayer Hill, s.B. (Colby Coll.) 1910.

Edwin Partridge Lehman, A.B. (Williams Coll.) 1910.

Samuel Albert Levine, A.B. 1911.

Lawrence Kirby Lunt, A.B. 1909.

John Alfred Parsons Millet, A.B. 1910.

William Richard Ohler, s.B. 1910.

George Byron Packard, Jr., A.B. (*Univ. of Colorado*) 1910. Henry Barber Richardson, A.B. 1910. Raymond Richmond Root, S.B. (*Dartmouth Coll.*) 1905. Harry Caesar Solomon, S.B. (*Univ. of California*) 1910. Wade Stanley Wright, S.B. (*Univ. of Pittsburgh*) 1910.

### Dr.P.H.

James Persons Simonds, A.B. (Baylor Univ.) 1901, M.D. (Rush Medical Coll.) 1907.

Thesis: "Studies in Bacillus Welchii, with special Reference to Classification and to its Relation to Diarrhoea."

### THE MEDICAL SCHOOL

### CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH

Cumming, James Gordon, M.PH. (Univ. of Wisconsin)
1903, M.D. (ibid.) 1913,
Ann Arbor, Mich.
Smillie, Wilson George, A.B. (Colorado Coll.) 1908, M.D.
(Harvard Univ.) 1912,
Eaton, Colo.

### FOURTH CLASS

Centreville, R. I.

Rochester, N. Y.

Allen, Edward Bartlett, A.M. (Brown Univ.) 1911,

Allen, Walter Charles, s.B. (Univ. of Rochester) 1911,

Amiral, Hiram Hygazon, A.B. (Univ. of Rochester) 1911,	Alameda, Cal.
Appleton, Paul, PH.B. (Brown Univ.) 1911,	Providence, R. I.
Babington, Vernon Edgar, A.B. (Brown Univ.) 1911,	Cranston, R. I.
Bloomer, Earl, A.B. (Univ. of Missouri) 1913,	St. Joseph, Mo.
Bock, Arlie Vernon, A.B. (Upper Iowa Univ.) 1910,	Dubuque, Ia.
Boller, Stanley, A.B. (Univ. of Southern California) 1911,	Los Angeles, Cal.
Bowes, Frank Arthur, A.B. (Holy Cross Coll.) 1910,	Vaterbury, Conn.
Bridges, Edwin Stanley, A.B. (Univ. of New Brunswick)	
1908,	St. John, N. B.
Brown, George Percy, A.B. (Yale Univ.) 1911,	Barre
Brown, Harry Henderson, Jr., A.B. (Univ. of Texas) 1910,	Yoakum, Texas
Bumpus, Hermon Carey, Jr., PH.B. (Brown Univ.) 1912,	Madison, Wis.
Bunker, Henry Alden, Jr., A.B. 1910,	Brooklyn, N. Y.
Caldarone, Alfred Anthony, A.B. (Holy Cross Coll.) 1911,	Providence, R. I.
Christman, Robert Albert, PH.B. (Lafayette Coll.) 1911,	Kresgeville, Pa.
Clason, Freeman Pell, A.B. (Bates Coll.) 1911,	Gardiner, Me.
Cleaves, Edwin Nelson, A.B. 1911,	Medford
Cline, Samuel, s.B. 1911,	Roxbury
Cook, Edgar Charles, A.B (Lake Forest Coll.) 1911,	Mendota, Ill.
Cummings, Edward Joseph, A.B. (Boston Coll.) 1911,	So. Boston
Curtin, John Francis, A.B. (Holy Cross Coll.) 1911,	Lawrence
Devine, Bernard Francis, A.B. 1911,	Nahant
	ngdon Valley, Pa.
Dole, Kenneth Llewellyn, A.B. (Leland Stanford Jr.	
Univ.) 1912,	Jamaica Plain
93	

Donnell, Clyde Henry, A.B. (Howard Univ.) 1911, Downing, John Godwin, A.B. (Boston Coll.) 1911,	Greensboro, N. C. So. Boston
Durkin, Harry Anthony, A.B. (Holy Cross Coll.) 1911,	Peoria, Ill.
Dwinell, George Francis, A.B. (Dartmouth Coll.) 1911,	Manchester, N. H.
Edwards, Henry William, Jr., s.B. (Univ. of Rochester	
	•
1911,	Rochester, N. Y.
Edwards, Sumner, A.B. (Bowdoin Coll.) 1910,	Bethel, Me.
Edwards, Walter Davis, A.B. (Univ. of Rochester) 1911,	Rochester, N. Y.
Fein, Harry, A.B. 1911,	Boston
Flagg, Charles Monroe, s.B. 1905,	Cambridge
Généreux, Edmond Alfred, A.B. (Holy Cross Coll.) 1911	
	San Francisco, Cal.
Gillespie, Norman Wilkinson, s.B. (Tufts Coll.) 1911,	Dorchester
Gillon, Charles Joseph Carroll. Ph.B. (Holy Cross Coll	.)
1911,	Taunton
Gilpatrick, Leon Southard, A.B. (Colby Coll.) 1909,	Danforth, Me.
Grabfield, Gustave Philip, A.B. (Williams Coll.) 1912,	Cincinnati, O.
Hankey, Daniel Clyde, A.B. (Westminster Coll.) 1909,	Ford City, Pa.
Hodgson, John Sprague, Ph.B. (Brown Univ.) 1912 (191	11), Esmond, R. I.
Horan, Joseph Carrigan, A.B. (Sacred Heart Coll.) 191 A.M. (ibid.) 1913,	l, Denver, Colo
Hudson, Carl Bibb, A.B. 1912 (1911),	Montgomery, Mo.
Jackson, Arthur Morison, s.B. (Dartmouth Coll.) 1911,	Everett
Janney, James Craik, A.B. 1911,	Wynnewood, Pa.
Johnson, Odin James, A.B. (Univ. of Minnesota) 1911,	Lyle, Minn.
Kibby, Sydney Vernon, A.B. 1908 (1907),	Chelsea
King, Edward, A.B. (Univ. of Georgia) 1910,	Atlanta, Ga.
Lawler, John Charles, A.B. (Holy Cross Coll.) 1911,	Bellows Falls, Vt.
Lee, Edward Kerk, A.B. (Loyola Coll.) 1910,	Perryman, Md.
Lowrey, Lawson Gentry, A.B. ( <i>Univ. of Missouri</i> ) 1908 A.M. ( <i>ibid.</i> ) 1910, Exce	elsior Springs, Colo.
McCaffrey, Jerome Joseph, A.B. (Holy Cross Coll.) 1911	, Attleboro
McGuire, Joseph Hoshal, A.B. (Eureka Coll.) 1911,	Eureka, Ill.
MacPherson, Donald John, s.B. (Univ. of Rochester) 19	11, Palmyra, N. Y.
McQuesten, Philip, A.B. (Dartmouth Coll.) 1911,	Nashua, N. H.
Mallory, Meredith, A.B. (Univ. of Illinois) 1911,	Batavia, Ill.
Meaker, Samuel Raynor, A.B. (Princeton Univ.) 1911,	Carbondale, Pa.
Montgomery, James Blaine, A.B. (Dartmouth Coll.) 191	
Morriss, William Sarsfield, A.B. 1911,	Fall River
Murray, George Aloysius, A.B. (Boston Coll.) 1909,	Dorchester
Nigro, Michele, A.B. 1910 (1911),	Revere
Oslin, Joseph Edwin, A.B. (Brown Univ.) 1910,	Boston
Commy Cocopia Barring Mills (Brown Crittin) 1010)	DOSCOI

Packard, Fabvan, A.B. 1912. Allston Peck, Martin William, S.B. (Dartmouth Coll.) 1902. Lynn Perkins, William Albert, AB. 1912, Ogden, Utah Plouffe, Bernard Louis, A.B. (Holy Cross Coll.) 1911. Webster Raia, Joseph Ernest, A.B. (Brown Univ.) 1911, Providence. R. I. Redden, William Rufus, A.B. (Bates Coll.) 1906, Roxbury Richardson, Ira Walter, A.B. (Colby Coll.) 1910, Kennebunk, Me. Sargent, Arthur Forrest, A.B. (Dartmouth Coll.) 1911, Pittsfield. N. H. Sharry, Charles Francis, A.B. 1910, Boston Sowles, Horace Kennedy, A.B. (Clark Univ.) 1910. Barre, Vt. Spruit, Charles Booth, A.B. (Illinois Coll.) 1908, Jacksonville, Ill. Stern, Neuton Samuel, A.B. 1912, Memphis, Tenn. Strauss, Arthur Edgar, s.B. 1912. St. Louis, Mo. Thaxter, Langdon Thom, A.B. (Williams Coll.) 1911, Portland, Me. Thomas, Harold, A.B. (Acadia Coll.) 1910. Wollaston Tucker, Cassell Clark, A.B. (De Pauw Univ.) 1911, Greencastle, Ind. Van Gorder, George Wilson, A.B. (Williams Coll.) 1911, Pittsburgh, Pa. Van Stone, Leonard Matthews, A.B. (Colorado Coll.) 1911, Denver, Colo. Woodward, Harry Whiting, A.B. (Bowdoin Coll.) 1910,

Colorado Springs, Colo.

Wright, Louis Tompkins, A.B. (Clark Univ., Atlanta, Ga.) 1911.

Atlanta, Ga.

### THIRD CLASS

THIED CHIOS	
Aaronson, Jacob, A.B. 1912,	Chelsea
Barrow, William Hulbert, A.B. 1908,	Chelsea
Betteridge, Lawrence Augustine, A.B. 1912,	Boston
Bigelow, George Hoyt, A.B. 1913 (1912),	Framingham
Briggs, Maurice Taggart, A.B. 1912,	E. Lynn
Butler, Edmund John, A.B. (Boston Coll.) 1912,	Cambridge
Churchill, Kenneth, A.B. (Bowdoin Coll.) 1912,	Newtonville
Dillon, Edward Saunders, A.B. (Princeton Univ.) 1911,	Woodbury, N. J.
Fogg, Neil Augustus, A.B. (Bowdoin Coll.) 1913,	Freeport, Me.
Gilbert, John Joseph, A.B. (Brown Univ.) 1912,	Woonsocket, R. I.
Goethals, Thomas Rodman, A.B. 1912, Culeb	ra, C. Z., Panama
Golden, Ross, A.B. (Cornell Coll.) 1912,	Des Moines, Ia.
Grace, Clarence Milo, A.B. (Washington State Univ.) 1912,	Chillicothe, Mo.
Gregg, Alan, A.B. 1911,	Chestnut Hill
Gustafson, Paul, A.B. 1912,	Cambridge
Hamilton, John Homer, s.B. (Oklahoma Agricultural	
and Mechanical Coll.) 1910,	Stillwater, Okla.

Harding, Edward, A.B. 1911,	Boston
Harris, Carl Thorburn, s.B. (Univ. of Rochester) 1912,	
H'Doubler, Francis Todd, A.B. (Univ. of Wisconsin	
1907,	Madison, Wis.
Hodgdon, Frank Wellington, Jr., A.B. 1911,	Arlington
Houston, David Walker, Jr., A.B. (Princeton Univ.) 19:	
Hurst, Benoni Price, A.B. (Amherst Coll.) 1912,	Baltimore, Md.
Hussey, Earle Edward, A.B. (St. Mary's Coll.) 1911, A.M.	
( <i>ibid</i> .) 1913,	Wichita, Kan.
Hyman, Clarence Henry, s.B. (Heidelberg Univ.) 1911,	Payne, O.
Koefod, Hilmar, s.B. (Beloit Coll.) 1911,	Glenwood, Minn.
Lacey, Walter Hamer, A.B. 1912,	Wollaston
Langmann, Alfred Gustav, A.B. 1912,	New York, N. Y.
Lanman, Thomas Hinckley, A.B. 1912,	Cambridge
Learned, Elmer Turell, A.B. (Yale Univ.) 1912,	Fall River
Lowry, Franklin Patterson, s.B. 1912,	Newton
Lyon, Arthur Bates, A.B. (Amherst Coll.) 1912,	Brockton
McIntyre, John Archibald, s.B. (Cornell Coll.) 1912,	Mt. Vernon, Ia.
Moffat, Barclay Wellington, A.B. 1912,	Orange, N. J.
Morris, Samuel Leslie, Jr., s.B. (Davidson Coll.) 1911,	Atlanta, Ga.
Nichols, Andrew, 3d, AB. 1912,	Hathorne
Nissen, Harry Archibald, A.B. (Univ. of So. Dakoto	1)
_	
1911,	Vermillion, So. Dak.
1911, Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912,	
	Vermillion, So. Dak.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912,	Vermillion, So. Dak. Worcester
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911,	Vermillion, So. Dak. Worcester Cambridge
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912,	Vermillion, So. Dak. Worcester Cambridge Bedford
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913,	Vermillion, So. Dak. Worcester Cambridge Bedford Malden Boston
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912,	Vermillion, So. Dak. Worcester Cambridge Bedford Malden Boston
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912,	Vermillion, So. Dak. Worcester Cambridge Bedford Malden Boston - Spencer, Ind.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912,	Vermillion, So. Dak. Worcester Cambridge Bedford Malden Boston - Spencer, Ind. Pittsburgh, Pa.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston - Spencer, Ind. Pittsburgh, Pa. Cincinnati, O.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913, Scholl, Albert John, Jr., A.B. (Leland Stanford Jr. Univ.)	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.  Los Angeles, Cal. Berne, N. Y.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913, Scholl, Albert John, Jr., A.B. (Leland Stanford Jr. Univ. 1913, Settle, Howard Edwin, A.B. 1913 (1912), Stidger, Ivan Read, A.B. (Allegheny Coll.) 1911,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.  Los Angeles, Cal. Berne, N. Y. Cameron, W. Va.
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913, Scholl, Albert John, Jr., A.B. (Leland Stanford Jr. Univ. 1913, Settle, Howard Edwin, A.B. 1913 (1912),	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.  Los Angeles, Cal. Berne, N. Y. Cameron, W. Va. Cambridge
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913, Scholl, Albert John, Jr., A.B. (Leland Stanford Jr. Univ. 1913, Settle, Howard Edwin, A.B. 1913 (1912), Stidger, Ivan Read, A.B. (Allegheny Coll.) 1911, Taylor, John Houghton, A.B. 1913 (1912), Tully, George Loughlin, A.B. 1912,	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.  Los Angeles, Cal. Berne, N. Y. Cameron, W. Va. Cambridge Milford
Oberg, Frank Thorwald, A.B. (Clark Univ.) 1912, Osgood, Howard, 2d, A.B. 1911, Parker, Frederic, Jr., A.B. 1913, Peabody, Charles William, A.B. 1912, Putnam, James Jackson, Jr., A.B. 1912, Ragle, Benjamin Harrison, A.B. (De Pauw Univ.) 1912, Rapport, David Louis, A.B. 1912, Redway, Lawrence David, A.B. 1912, Ricci, James Vincent, A.B. (Brown Univ.) 1913, Roberts, Bertrand Earle, A.B. 1912, Savage, Joseph Carr, A.B. (Univ. of Colorado) 1913, Scholl, Albert John, Jr., A.B. (Leland Stanford Jr. Univ. 1913, Settle, Howard Edwin, A.B. 1913 (1912), Stidger, Ivan Read, A.B. (Allegheny Coll.) 1911, Taylor, John Houghton, A.B. 1913 (1912),	Vermillion, So. Dak.  Worcester Cambridge Bedford Malden Boston Spencer, Ind. Pittsburgh, Pa. Cincinnati, O. Providence, R. I. Newton Centre Denver, Colo.  Los Angeles, Cal. Berne, N. Y. Cameron, W. Va. Cambridge

Waite, John Herbert, s.B. (Bucknell Univ.) 1911, Loc Watt, George, s.B. (Univ. of Michigan) 1914, Weld, Stanley Burnham, A.B. (Dartmouth Coll.) 1912, Wells, Ward Stanley, s.B. (Grinnell Coll.) 1909, Wilbur, George Browning, s.B. 1912, Withington, Paul Richmond, A.B. 1912.

Lock Haven, Pa.

Boston
Winchester
Nashua, Ia.
W. Newton
Boston

Dorchester

### SECOND CLASS

Adams, Frank Dennette, LITT.B. (Princeton Univ.) 1913, Washington, D.C. Adams, William Bradford, A.B. 1913, Springfield Ashton, Leslie Orrell, s.B. (Dartmouth Coll.) 1913, Lawrence Baker, Horace Mitchell, s.B. (Mass. Agricultural Coll.) 1912. Selbyville, Del. Belknap, Robert Willis, A.B. (Bowdoin Coll.) 1913, Damariscotta, Me. Berry, Francis Brown, A.B. 1914, Providence, R. I. Biascoechea, Diego Abraham, s.B. (Univ. of Michigan) 1914. San Juan, P. R. Brown, Frederick Ronald, A.B. (McGill Univ.) 1913. Danville, Quebec, Can. Buchanan, Edwin Porter, s.B. (Princeton Univ.) 1913, Pittsburgh, Pa. Buckman, Thomas Ellwood, A.B. 1912, A.M. 1914, Cambridge Bugbee, Edwin Percy, s.B. (Tufts Coll.) 1912, Methuen Busby, Eldon Durward, A.B. (McGill Univ.) 1913, Ottawa, Ont., Can. †Cassidy, Franklin Chester, Medford Cheney, Marshall Chipman, A.B. (Univ. of California) 1909, Berkeley, Cal. Chisholm, Lawrence Chesley, s.B. (Dartmouth Coll.) 1913, Salem Clifford, Randall, A.B. 1912, New Bedford Clifford, Wallace Alton, A.B. (Bates Coll.) 1908, South Paris, Me. Crile, Dennis Rider Wood, s.B. (Univ. of Wisconsin) 1914, Roswell, N. M. Cunningham, Thomas Donald, s.B. (Dartmouth Coll.) 1913, Denver, Colo. Dresel, Rudolph Ludwig, A.B. (Univ. of California) 1913, San Francisco, Cal. †Eaton, Harold Burney, Frankfort a. M., Germany Fellows, Albert Whittier, s.B. (Dartmouth Coll.) 1914, Dorchester Findley, Eldon Marshall, A.B. (Univ. of Missouri) 1914, Graham, Mo. Graham, Mo. Findley, William Meyer, A.B. (Univ. of Missouri) 1913, Wollaston FitzGerald, Edmund Boyd, A.B. 1913,

Foley, John Arthur, A.B. 1911,

<sup>†</sup> Admitted on two years of college work.

Goffin, Launcelot Curry, A.B. (Univ. of Missouri) 1914,	
	ond Beach, Wash.
Gould, Adrian Gordon, PH.B. (Brown Univ.) 1913,	Youngstown, O.
Goulding, Arthur Melville, A.B. (Univ. of Toronto) 1910,	
	oronto, Ont., Can.
Gring, Ambrose Daniel, 2d, A.B. (Yale Univ.) 1912,	Cambridge
Hall, Francis Cooley, LITT.B. (Princeton Univ.) 1913,	Brookline
Hutchinson, Charles William, A.B. 1906, A.M. 1907,	Framingham
Hutchinson, Rollo Wilson, A.B. (Dartmouth Coll.) 1913,	Milford, N. H.
Isaacson, Abraham Samuel, A.B. (Brown Univ.) 1913,	Malden
Johnston, James Scott, A.B. (Univ. of Michigan) 1910,	
A.M. (ibid.) 1911,	Ithaca, N. Y.
Klein, Armin, A.B. 1914,	Chelsea
Lurie, Moses Hyman, D.M.D. 1913,	Roxbury
Mabon, Thomas McCance, s.B. (Princeton Univ.) 1913,	Pittsburgh, Pa.
McCarthy, James Matthew, Jr., A.B. (Holy Cross Coll.)	
1913,	Woonsocket, R. I.
MacGhee, Aaron Lawson, s.B. (Colby Coll.) 1913,	Augusta, Me.
Marshall, John Ross, A.B. 1913,	Brookline
Meysenbug, Ludo von, A.B. (Washington and Lee Univ.)	
1913,	New Orleans, La.
Moloney, James Bowe, A.B. 1913,	So. Boston
Neal, Kemp Prather, A.B. (Trinity Coll) 1913,	Monroe, N. C.
Nisbet, Douglas Heath, s.B. (Davidson Coll.) 1913,	Charlotte, N. C.
Norbury, Frank Garm, A.B. (Illinois Coll.) 1912, A.M.	
(Univ. of Illinois) 1913,	Springfield, Ill.
†Oerting, Harry,	St. Paul, Minn.
Parkins, Leroy Edward, A.B. (Simpson Coll.) 1912,	Knowlton, Ia.
Parmenter, Derric Choate, A.B. 1913,	Gloucester
Paul, Benjamin Delos, s.B. (Purdue Univ.) 1912,	Brookston, Ind.
Pennell, Walter Johnson, A.B. (Bates Coll.) 1913,	Auburn, Me.
Persons, Carl Clough, A.B. (Wesleyan Univ., Conn.) 1913	, Maynard
Pratt, Aaron Paul, A.B. (Clark Univ.) 1913,	So. Framingham
†Shirley, John Newton,	So. Duxbury
†Strahlmann, Louis,	San Diego, Cal.
Surls, Joseph Kiddoo, A.B. (Williams Coll.) 1913,	Reading, Pa.
Thomasson, Aaron Hood, A.B. (Lincoln Univ.) 1896,	Boston
Thompson, Hartwell Greene, A.B. (Yale Univ.) 1913,	Taftville, Conn.
Townsend, De Wayne, A.B. (Univ. of Wisconsin)	
1912, C	conomowoc, Wis.

<sup>†</sup> Admitted on two years of college work.

Bangor, Me.

Wearn, Joseph Treloar, s.B. (Davidson Coll.) 1913, Charlotte, N. C. Welles, Edward Sawtelle, s.B. (Iowa State Coll.) 1913. Los Angeles, Cal. Wendell, Percy Langdon, A.B. 1913, Jamaica Plain Wetherell, Bryant Davis, A.B. (Williams Coll.) 1912, Holvoke White, Joseph Warren, A.B. 1913, Roxbury Wylde, Russell Arthur, A.B. (Dartmouth Coll.) 1912. Lawrence Young, William Bartholomew, A.B. 1913, Rockland Zovickian, Hovhannes, Ph.B. (Brown Univ.) 1909, A.M. (ibid.) 1909, Providence, R. I.

### FIRST CLASS

Ames, Forrest Bertram, A.B. (Univ. of Maine) 1913,

\*Angevine, Robert Winsper (Univ. of Rochester), Rochester, N. Y. Atwater, Reginald Myers, A.B. (Colorado Coll.) 1914, Colorado Springs, Colo. Badger, Omar Perlie, A.B. (Bowdoin Coll.) 1914, Skowhegan, Me. Bell, Leo Pecci, A.B. (Univ. of Missouri) 1912, Monroe City, Mo Blackway, Charles Everett, A.B. (Brown Univ.) 1914, Fall River Bullard, Carleton Wheeler, s.B. 1914, So. Framingham Burgess, Barry Hovey, A.B. (Acadia Coll.) 1912, A.M. (Harvard Univ.) 1914. Sheffield Mills Station, N. S. Burwell, Charles Sidney, Jr., A.B. (Allegheny Coll.) 1914, Meadville, Pa. Boston Callanan, Francis Jervois, A.B. 1914, †Callister, Alfred Cyril, Salt Lake City, Utah Cameron, Owen John, A.B. (St. Francis Xavier's Coll.) Antigonish, N. S. 1914. †Carroll, James William, Cambridge Chaffin, George Lawrence, A.B. (Univ. of Utah) 1914, Farmington, Utah Boston Chapman, William Harden, A.B. 1913, \*Cohen, Hyman (Harvard), Dorchester Colby, Fletcher Hatch, s.B. (Dartmouth Coll.) 1914, Allston Wenham \*Currier, Donald Estes (Harvard), Curtis, Robert Dudley, A.B. 1914, Dorchester Daland, Ernest Merrill, A.B. (Brown Univ.) 1912, Wakefield Drake, Wallace Horne, s.B. (Dartmouth Coll.) 1914, No. Weymouth Eastwood, William Raymond, PH.B. (Brown Univ.) 1913, A.м. (ibid.) 1914, Providence, R. I. Edgelow, Arthur Ford Geddes, A.B. (Trinity Coll., Conn.) Cairo, N. Y. 1914,

<sup>\*</sup> Has completed work for the Bachelor's degree. † Admitted on two years of college work.

Eisenberg, Adolph Martin, s.B. (Mass. Institute of	f
Technology) 1912, A.M. (Harvard Univ.) 1914,	Roxbury
Ellis, Ralph Warner, A.B. (Clark Univ.) 1914,	Worcester
English, Hubert Morton, A.B. (Univ. of Illinois) 1914,	Marshall, Ill.
*Finkelstein, Harry Paul (Harvard),	E. Boston
Foster, William Harold, A.B. (Boston Univ.) 1914,	Boston
Freeman, Mervin, A.B. (De Pauw Univ.) 1913,	Sullivan, Ind.
Fremont-Smith, Maurice, A.B. 1914,	Washington, D. C.
†Frost, Morton Fletcher,	Rumford, R. I.
†Gabe, William Edwin,	Indianapolis, Ind.
Gabriels, Joseph Augustus, A.B. (Holy Cross Coll.) 1914	, Watervliet, N. Y.
Gallupe, Harold Quimby, s.B. (Tufts Coll.) 1911,	Everett
Goldman, Abe Milton, A.B. (Univ. of Kansas) 1914,	Kansas City, Mo.
Gray, Ellis Barksdale, A.B. (Trinity Coll., N. C.) 1914,	Gray Court, S. C.
Gunby, Paul Clark, A.B. 1914,	Sherman, Tex.
Harris, Francis Sterling, Ph.B. (Yale Univ.) 1914,	Cambridge
Harris, Walter Callahan, A.B. (Holy Cross Coll.) 1914,	Millbury
Havens, Leon Clive, A.B. (Colorado Coll.) 1913, A.M.	
(ibid.) 1914, Colo	rado Springs, Colo.
Henderson, Charles Smith, A.B. (St. Francis Xavier'	
Coll.) 1914,	Parrsboro, N.S.
*Hopkins, Frederick Sherman (Harvard),	Springfield
Howe, Glover Elbridge, s.B. (Mass. Agricultural Coll.	)
1913,	Marlborough
Howes, Seth Francis Harrison, A.B. (Colby Coll.) 1914,	Southborough
Hun, Henry Hand, PH.B. (Yale Univ.) 1914,	Albany, N. Y.
Hunsberger, Harvey Samuel, A.B. (Olivet Coll.) 1909	),
A.M. ( <i>ibid</i> .) 1911,	Riverside, Cal.
*Hyman, Albert Solomon (Harvard),	Roxbury
Johnson, George Grady, A.B. (Trinity Coll., N. C.) 1913	Jurham, N. C.
Johnson, Ralph Montgomery, A.B. (Cornell Univ.) 1914	, Ogden, Utah
Kebabjian, Hrant Setrag, A.B. (Anatolia Coll.) 1913,	
	ora, Turkey in Asia
Kuder, Joseph Matthew, A.B. 1914,	Lehighton, Pa.
†Lincoln, James Rufus,	Wareham
Lord, Robert Mendon, A.B. (Brown Univ.) 1914,	Providence, R. I.
Lucas, Robert Theodore, A.B. (Trinity Coll., N. C.	
1914,	Charlotte, N. C.
McClellan, Reyburn, s.B. (Princeton Univ.) 1914,	Xenia, O.
ATT	2 2

 $<sup>^{\</sup>bullet}$  Has completed work in Harvard College for the Bachelor's degree. † Admitted on two years of college work.

McGowan, Daniel Joseph, Jr., A.B. (Holy Cross Co	oll.)		
1913,	Newport, R. I.		
McIntosh, Rustin, A.B. 1914,	New York, N.Y.		
McKenzie, John Ernest, A.B. (Wofford Coll.) 1912,	Hamer, S. C.		
McLaughlin, Edward Aloysius, A.B. (Brown Univ.) 19	14,		
	Providence, R. I.		
†McNamara, Frank Patrick,	Fitchburg		
Marvin, Harold Myers, A.B. (Davidson Coll.) 1914,	Jacksonville, Fla.		
Miller, Howard Stephen, s.B. (Univ. of Pittsburgh) 19	912, Freedom, Pa.		
†Millhoff, Clarence Dimmick,	Cleveland, O.		
Milliken, Robert Addison, A.B. (Princeton Univ.) 1914	4, Indianapolis, Ind.		
†Morrissey, Daniel Leo,	Bristol, R. I.		
Myers, Franklin Augustus, A.B. (Lincoln Univ.) 1913	, Brooklyn, N. Y.		
O'Connor, Alfred Smith, A.B. (Holy Cross Coll.) 1914	, Worcester		
O'Meara, John William, A.B. (Holy Cross Coll.) 1912,	Jamaica Plain		
Parkhurst, Albert Elisha, A.B. (Bowdoin Coll.) 1913,	Presque Isle, Me. Athens, Ga.		
Patterson, Russell Hugo, s.B. (Univ. of Georgia) 1914	Athens, Ga.		
†Rappleye, Willard Cole,	Menominee, Mich.		
Rieger, John Benjamin, PH.C. (Univ. of Michigan) 19	906,		
S.B. (ibid.) 1907, S.M. (George Washington Univ.) 19	14, Reading, Pa.		
*Rock, John Charles (Harvard),	Marlborough		
Rönne, George Emil, A.B. (Brown Univ.) 1914,	Providence, R. I.		
Root, James Harold, PH.B. (Yale Univ.) 1914,	Waterbury, Conn.		
*Rose, Julian (Harvard),	Brooklyn, N. Y.		
Sattler, Robert Ray, A.B. (Univ. of Michigan) 1911,	Cincinnati, O.		
Schussler, Hermann, Jr., s.B. (Univ. of California) 19	014,		
	San Francisco, Cal.		
Scott, Arthur Carroll, Jr., A.B. (Univ. of Texas) 1914	, Temple, Tex.		
†Seabury, Robert Brewster,	New Haven, Conn.		
Sefton, Wilfred, PH.B. (Yale Univ.) 1914,	Auburn, N. Y.		
†Sheffield, William Cyrenus,	Providence, R. I.		
Shields, James Burnett, s.B. (Dartmouth Coll.) 1914,	Boston		
*Shoenfield, Adolph (Harvard),	Youngstown, O.		
†Sisson, Eugene Pardon, Jr.,	Hamilton, N. Y.		
*Smith, Judson Arthur (Harvard),	Hudson Falls, N. Y.		
*Stone, Eric,	New York, N. Y.		
Street, Claudius Augustus, A.B. (Colorado Coll.) 1914,	Linville Falls, N. C.		
Sullivan, Edward Scanlon, A.B. 1914,	Concord, N. H.		
Taylor, Norman Henry, A.B. (Haverford Coll.) 1913, A	<b>1.</b> М.		
(Harvard Univ.) 1914,	New York, N. Y.		

Has completed work in Harvard College for the Bachelor's degree.
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Thorne, Fred Sanborn, A.B. 1913,	Brookline
Vail, Ramon Montgomery, PH.B. (Yale Univ.) 1914, Thomp	sonville, Conn.
Waring, Elmar Stebbins, A.B. (Univ. of South Carolina)	
1914,	Columbia, S. C.
Whitney, Raymond Cyrus, s.B. (Middlebury Coll.) 1914,	Millbury
Whyte, Harold Paul, A.B. (Laval Univ.) 1911,	Arctic, R. I.
Wickham, George Smallwood, A.B. (Holy Cross Coll.) 1914,	So. Lee
Wilcox, Charles Frederick, Jr., A.B. (Univ. of Utah)	
1913, Salt L	ake City, Utah
Williamson, Adam Cluness, A.B. (Westminster Coll.) 1911,	
A.M. (Princeton Univ.) 1914,	Brockton
Winsor, Allen Pellington, A.B. 1914,	Fairhaven
Woodward, Harry Joseph, s.B. (Norwich Univ.) 1912,	Montpelier, Vt.

### SPECIAL STUDENTS TAKING REGULAR WORK

Bressler, Charles Wesley, A.B. (Univ. of Missouri) 1913,	Grant City, Mo.
Calvin, Claudius Virgil, s.B. (Allegheny Coll.) 1914,	Meadville, Pa.
Hunter, William Edward, A.B. (Univ. of Utah) 1913, An	nerican Fork, Utah
Jackson, George Henry, Jr.	Newtonville
Jones, Merritt La Count, s.B. (Univ. of Wisconsin) 1919	2, Wausau, Wis.
Kerr, William John, s.B. (Univ. of California) 1912,	Los Angeles, Cal.
O'Donnell, John Joseph, Jr.	E. Boston
Shortell, Joseph Henry,	Salem
Taylor, Clifton Clark, A.B. (Dartmouth Coll.) 1912,	Bridgeport, Conn.

### SUMMARY

CANDIDATES FOR THE DEGREE	e of Doctor of Public
HEALTH	
CANDIDATES FOR THE DEGREE	OF DOCTOR OF MEDICINE
FOURTH CLASS	82
THIRD CLASS	61
SECOND CLASS	69
First Class	98
SPECIAL STUDENTS	9
Tomes	901
IOTAL	321

### GRADUATES OF COLLEGES

Acadia College	Purdue University 1
Allegheny College	Sacred Heart College 9
Amherst College	St. Francis Xavier's College (Nova
Anatolia College 1	Scotia)
Bates College 4	St. Mary's College
Beloit College	Simpson College
Boston College 4	Simpson College
Boston University 1	Trinity College (Conn.) 1
Bowdoin College 8	Trinity College (N. C.)
Brown University 21	Tufts College
Bucknell University	University of California
Clark University (Georgia) 1	University of Colorado 1
Clark University 4	University of Georgia
Colby College 4	University of Illinois
Colorado College 5	University of Kansas 1
Cornell College	University of Maine
Cornell University 1	University of Michigan 9
Dartmouth College	University of Minnesota
Davidson College 4	University of Missouri 8
De Pauw University	University of New Brunswick 1
Eureka College	University of Rochester
Gonzaga University	University of Southern California 7
Grinnell College 1	University of South Carolina 1
Harvard University 88	University of South Dakota 1
Haverford College 1	University of Texas
Heidelberg University 1	University of Toronto
Holy Cross College 16	University of Utah
Howard University 1	University of Wisconsin 4
Illinois College	Upper Iowa University 1 George Washington University 1
Iowa State College 1	George Washington University 1
Lafayette College	Washington and Lee University 1
Lake Forest College	Washington State University 1
Lincoln University	Wesleyan University (Conn.) 1
Loyola College 1	Westminster College
McGill University	Williams College
Massachusetts Agricultural College 2	Wofford College 1
Massachusetts Institute of Technology 1	Yale University 10
Middlebury College 1	Total
Norwich University	Counted more than once
Oklahoma Agricultural and Mechanical	
College	Total Number of College Graduates . 311
Olivet College 1	=
Princeton University 10	Number of Colleges

### ANNOUNCEMENT FOR 1915-16

The next session of the Medical School begins September 27, 1915. All students are required to register at the Dean's office on this day. Students registering in the Medical School for the first time will meet in Room 205 in the Administration Building of the Harvard Medical School, on Monday, the 27th of September, at 10 A.M. Students desiring to enter the Harvard Medical School in the first-year class, or with advanced standing, should file an application blank, which can be obtained from the Dean's office, on or before July 1st, 1915.

### CALENDAR

1915.	1	9	1	5				
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- Sept. 15, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 27, Monday.

  Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Tuesday. Columbus Day: a holiday.
- Nov. 1, Monday. Last day for receiving essays for the William H.

  Thorndike Prize.
- Nov. 25, Thursday. Thanksgiving Day: a holiday.
- Dec. 10, Friday, Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.
- Dec. 31, Friday. Last day for receiving dissertations for the Boylston Medical Prizes.

RECESS FROM DEC. 23, 1915, TO JAN. 2, 1916, INCLUSIVE

### 1916.

- Jan. 15, Saturday. Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1916.
- Jan. 26, Wednesday. Mid-year Examinations begin.
- Jan. 29, Saturday. Payment of the second instalment of the tuitionfee is required on or before this date.

- Feb. 1, Tuesday. Second half-year begins.
- Feb. 22, Tuesday. Washington's Birthday: a holiday.
- April 1, Saturday. Last day for receiving dissertations for the Bowdoin Prizes.

### RECESS FROM APRIL 16 TO APRIL 22, INCLUSIVE

- May 1, Monday. Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
- May 1, Monday. Last day for receiving applications for the Bullard Fellowships and the Moseley Travelling Fellowships.
- May 1, Monday. Last day for receiving applications for Scholarships for 1916-17 (except the Cheever, Haven, and Hayden Scholarships).
- May 1, Monday. Last day for receiving applications of candidates for the degree of M.D. in 1916.
- May 31, Wednesday. Memorial Day: a holiday.
- June 1, Thursday. Examinations begin.
- June 22, Thursday. Commencement.

### SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 24, INCLUSIVE

- Sept. 13, Wednesday. Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 25, Monday. Academic Year begins. Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Thursday. Columbus Day: a holiday.
- Nov. 1, Wednesday. Last day for receiving essays for the William H.

  Thorndike Prize.
- Nov. 30, Thursday. Thanksgiving Day: a holiday.
- Dec. 11, Monday. Last day for receiving applications for the Cheever, Haven, and Hayden Scholarships.









JUN 1995



